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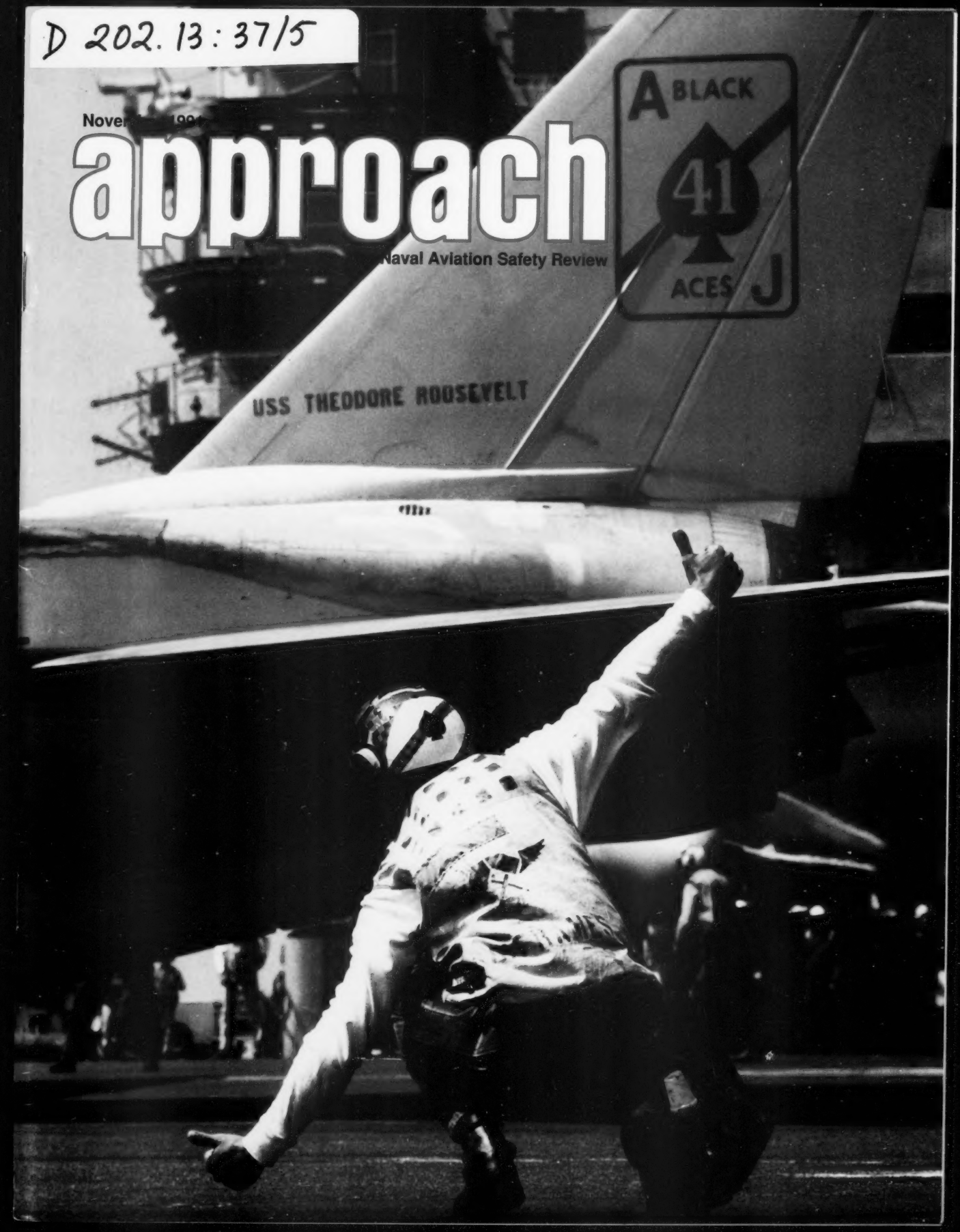
approach

Naval Aviation Safety Review



Same Time Next Year

At Tailhook I met a guy who had ejected from an EA-6B. He didn't walk, talk or drink any differently. I suppose he was still the same height as before the ejection. In fact, if he hadn't told me, I never would have guessed he'd been shot out of an airplane that was rolling off the deck of a carrier.

He told me about the guy who ejected with him, a newbee who really wasn't sure what happened. Imagine that — your first time at the boat and poof, you're a member of the Martin-Baker Tie Club.

He also talked about the pilot who was still trying to fly the bird as it dropped below the deck edge. He got maybe one swing in his chute. If the pilot had been alone, I wondered, would he have pulled the handle in time.

As we sat there watching the ever-popular Tailhook teaser (including his own ejection) those fellows crashing through canopies, striking ramps, and hitting earth and water became real people. No longer shadowy figures on murky videotape. They were neighbors and friends, husbands and brothers.

I watched my fellow aviators gaze at the screen as rock and roll music accompanied the moments of terror, confusion and surprise. They laughed, they grimaced, they pointed in amazement. Few walked away without watching more than once. Often they returned with friends as if they wanted to share some great secret.

As the sound of money and the cheers of camaraderie echoed through the halls of that desert town, I wondered if anyone thought that they might be on next year's teaser.

Lt. Steve Halsted
Approach Editor

approach

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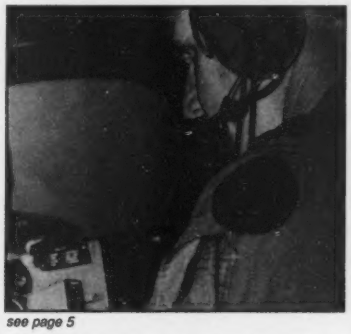
On the cover: Final check. A VF-41 Tomcat gets a final look before launching from USS *Theodore Roosevelt* (CVN-71). Photo by PHC(AW) Denis Keske.



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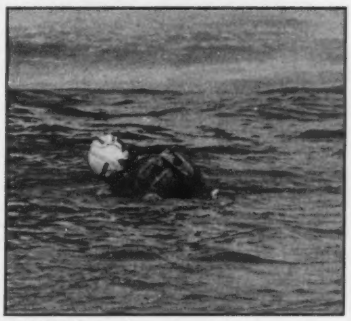

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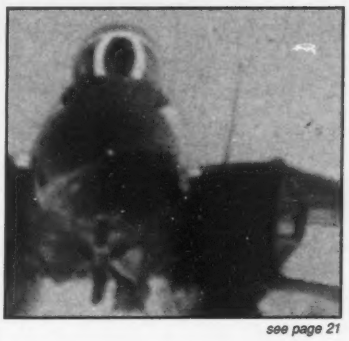

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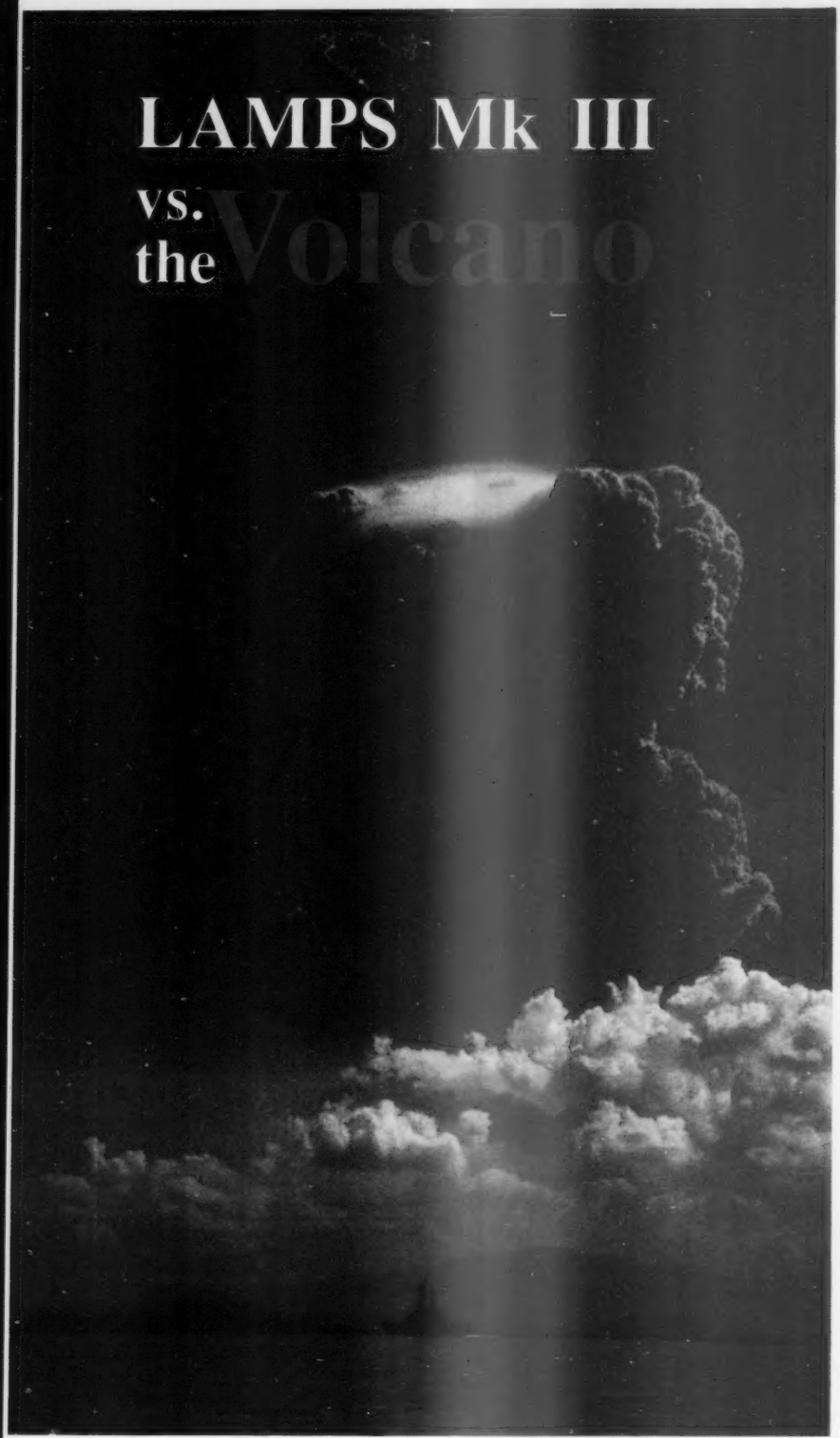
LAMPS Mk III vs. the Volcano



A cloud of ash and rock rise from Mt. Pinatubo as USS *Arkansas* (CGN-41) sails into Subic Bay. (U.S. Navy Photo)

By LCdr. Steven M. Clary

On a warm, sunny Wednesday morning at NAS Cubi Point, the OINC of LAMPS Det Cubi, and I (the OINC of a two-plane det) were talking about recent events and how they would effect our shorebasing requirements. Clark AFB had been evacuated because of the eruption of Mt. Pinatubo, and all of the base's personnel were living in the billeting spaces I thought I had confirmed.

Higher authority had directed me to use shorebasing because of our ship's commitment to provide support to the local Marines. I was in the unenviable position of trying to find billeting for the entire det in the middle of the influx of 14,500 people from Clark. As I explored the possibilities with the Cubi Det OINC, we were interrupted by an excited crewman.

"Geez, sir, you gotta come outside and see it. She just blew!"

As we went outside we saw one of nature's most awesome displays of her destructive power. Mt. Pinatubo had just blasted 10 cubic miles of earth into the air. While everyone went racing for their cameras, the plume rose faster than a space shuttle liftoff.

After the initial surprise wore off, the newest immediate concern of the Marine reserve squadron and our LAMPS det was to hangar our aircraft, tape and seal them up, and brace ourselves for the ash fall-out. All of the pilots were worried about the effects of the ash, because Mt. St. Helens was still burned into everyone's memory. Remember the engine failure of a 747 flying through the ash?

What followed in the next few hours can only be described as chaos, but executed in an orderly manner. Base ops told all available pilots and aircraft to launch and they would take care of the clearance en route. I was told to hangar my helicopters, then prepare them to fly back to my ship, then to hangar the birds, once again. Finally, and with definite probable certainty, we were told to go to

the ship. We flew onboard. I now felt reasonably sure that our aircraft were safe from the ash. Later that day, we got word to fly the planes back ashore and hangar them at LAMPS Det Cubi.

At this point, you might ask just what the priorities were. The sky had cleared and the effects of the ash fall-out were negligible. Information from higher authority led us to believe that operations were proceeding normally and that the air det would be billeted on a ship in port. Not wanting to take chances, we taped the aircraft and completed a modified preservation before securing for the day.

Flight operations for the base were normal on V+1. I told my aircrew to remain well clear of the volcano. At the end of the last flight, the aircraft were hangared and preserved in a modified fashion. LAMPS Det Cubi's hangar has no doors to keep the weather out, so these precautions were necessary. Not only did we place the normal plugs on all orifices, but we put tape around the cabin door, static ports, the seams along the tunnel shafts, nose bays, oil coolers and APU compartments. In short, everywhere we thought that dust could enter. We weren't planning on flying on V+2 anyway, so everyone was busy planning a volcano party.

V+3 was "Black Saturday." The volcano erupted with so much force that at 1130, Cubi Point looked as black as any night in the Persian Gulf. The subsequent earthquakes only amplified my concern for the hangar's durability. I thought about the unpleasant possibility of writing a ground mishap report on two SH-60Bs pancaked by a hangar through an act of God. How about safety? Does this qualify as an act of God, or was it preventable?

The ship we were on mounted an herculean attempt to wash the ash off its decks. The draft reading indicated that the ship had taken on almost *350 tons* of ash. Other ships recorded similar amounts.

The next day, the MO and I went to see if our aircraft were still in one piece. The destruction that we saw along the way defies description. Imagine five inches of gray snow covering everything you see. Then keep in mind that a cubic foot of ash is considerably heavier than a cubic foot of snow. Add that fact to your concern as you watch buildings collapse that you thought were stronger than your hangar. To our surprise, the hangar still stood, but the hangar nearby where three CH-53s were was not so fortunate.

We first wanted to remove the ash's weight from the hangar. We got shovels, brooms and blankets. We weren't concerned with disposal at this point. As the detail began to work, other priorities began to appear. For instance, water was foremost. We would have had to get containers of water if the pipes burst.

One of the many bus loads of evacuees from Clark AFB gets a helping hand from the members of the crew of USS *Abraham Lincoln* (CVN-72) at NAVSTA Subic Bay. (PHC Daniel Murray)

4 NAVSTA Subic Bay suffered heavy ash fall from the eruption of Mt. Pinatubo and typhoon rains. (PHAN) David Grueneich)

Fortunately, there was water, but from the hot-water supply, not because the pumps were operating. We had to conserve water. Coming from an FFG, it wasn't hard. Electricity was out across the entire base. We couldn't communicate with other people and for the time being, we were on our own.

Later, the Marines began to show up and work on their aircraft. I met the reserve squadron CO and we both agreed that the hangar was the priority. On V+4, both Navy and Marine teams worked side by side. We even developed a friendly competition as to which work party could remove the most ash. It was like the famous chain-gang scene in "Cool Hand Luke" when they were building the road.

On V+5 higher authority decided that we would remain on the beach while the ship helped evacuate civilians. We had to fend for ourselves for billeting and food. My admin officer worked on this task. I had other officers working on other requirements while I talked with the CTF commander. Flexibility was a must.

V+6 found the base digging itself out and preparing for flight operations. The H-3s from VC-5 began security patrols and making damage assessment flights once their area outside the hangar was cleared. We anticipated being tasked to help support flight operations. The phone lines were working and I had already checked in with my squadron CO. I told him about our situation.

His response was typical. "Keep it safe and don't be lured into anything unusual."

How did we operate in this environment? The SH-60B NATOPS doesn't specifically address takeoffs and landings in a dusty environment, but then, the plane was not designed to hunt submarines under the desert.

Common sense suggested that we make max-power takeoffs and no-hover landings to minimize ingesting ash into the helo or the engines.

We watered down the landing area every day before each takeoff. We carefully coordinated flight ops with the Marines for launch and recovery times. Only those aircraft that were actually launching were spotted. The rest remained in the hangar until their takeoff time.

We sandbagged the surrounding area to reduce the effects of wind blowing fine dust onto the LZ. All helos were washed with fresh water before we secured from flight operations. They were also rinsed before the first takeoff and kept plugged before starting the engines.

I hope you never have to go through the ordeal we experienced, but if you do, apply what you have learned from training. Think ahead and anticipate problems. Ask yourself the question, "What would I do if a volcano suddenly erupted and I was left stranded on the beach?"◄

LCdr. Clary is an SH-60B pilot with HSL-47.

The XO's Wakeup Call

By Cdr. Richard W. Hess

I remember how the day started: it was just another day in the life of an XO. There were lots of special request chits to scrutinize and, of course, a "things to do" list that filled many pages of my notebook. I was also on the flight schedule. I can't remember exactly what was on my mind but I do recall looking at the schedule and noting that it was a routine mission that I had flown many times before with the same BN. No real need to do much preflight preparation for this one.

During the brief, our only concern was how quickly we could get to Boardman, our local bombing range some 200 miles from the field. We didn't spend too much time discussing the fairly nondescript 20-minute low-level part of the flight.

Our takeoff and climb were routine and once at altitude, I pushed the throttles to max-allowable continuous EGT. My BN noted almost 70 knots of tailwind and a ground speed of 555 knots. It looked like this flight would take less time than I thought. Super!

With 30 miles to go until our entry point, we started down from our cruising altitude of 15,000 feet. I remember pushing the nose over to about 35 degrees nose down without reducing power. Man! We were making tracks! I pushed terrain clearance on as we passed through 7,000 feet MSL and reduced the dive angle to 15 degrees. That's strange, the radar altimeter, which I had set at 4,000 feet, went off. Something just didn't look right.

My BN said we had clearance out to 10 miles and told me to check my altitude as he sweetened his radar cursor placement on the upcoming entry point. As I reached up to readjust the radar altimeter to the preplanned low-level setting, it happened. A sharp and professionally painful bell went off as all our instruments instantly froze. We both instinctively turned to look at each other in disbelief and embarrassment. We had hit the ground seven miles before the entry point, 10 degrees nose down at better than 520 knots. The pressure altimeter read 2,200 feet. Yes, we had crashed the simulator!

After a quick reset by a thankfully unconcerned civilian operator, we were on our way and finished the hop.

During our debrief, we exchanged the standard delta-sierra comments and also made veiled comments for mutual comfort. Yes, of course, we would never do the same thing in a "real" aircraft. Then, we returned to the daily paperwork grind.

Although I felt uneasy for the rest of the day, it didn't really hit me until that night during a discussion with my wife. I jokingly mentioned that I had flown into the ground during the day's simulator hop. Her response was both unexpected and sobering.

"What do you mean you crashed the simulator? You've always told me that it was a big deal, something to be taken seriously. Are you grounded? Do you have to go before a board? Rick, you're effectively dead, you jerk! How can you treat it so lightly?"

What if this had been a real airplane? My wife would be a widow, our four children would be fatherless, and all my friends and shipmates would sit around a bar shaking their heads saying it must have been something mechanical that caused the crash. I was too good a pilot. We were too experienced a crew to have simply flown into the ground.

Peter Mersky

I was lucky in many ways. First, lucky that it happened in a simulator. I am still alive and able to write this article. Besides, I can always maintain that I would never have let it happen in a "real" aircraft. Second, that it did happen. The "crash" made me go over in my mind that it very well could have been real.

I am writing this story not so much to emphasize crew coordination, copilot duties, or to lecture you on what we did wrong. This is simply a wakeup call, one I heard loud and clear. It may save my life, the life of my BN, and a Navy aircraft. ◄

Cdr. Hess is an A-6 pilot and the XO of VA-52.

MIL-itary Madness

by J. R. Boyer

...lowering the gear might help.

As the squadron schedules officer, I decided I was overdue for a good-deal hop, so I penciled myself into the first ACM cycle of the day. It would be a "light your hair on fire" flight and a great way to start the day without the usual preoccupation of hawking the gas gauge or hunting for the tanker.

It was a beautiful day in the South China Sea and the event went well with two multi-plane engagements and a follow-up 1 v 1 before we went home. After the knock-it-off call, we turned toward the ship, throttled back, and prepared for a blue-water recovery. I then realized that even with both engines at idle, I was still overtaking my lead.

I started jinking to stay in position until I noticed that the right engine was still in MIL power, even though both throttles were at idle. Well, first things first. I told lead about my problem. As any A-6 driver will tell you, gas available is not one of the Hornet's strong points, so with some sense of urgency, people started offering solutions.

The first suggestion came from my lead, who was relying on memory. Unfortunately, his solution was only applicable to a left engine stuck in MIL. He got his PCL out. It said that lowering the gear might help. Because I was still fast, I broke into a left turn to slow down. However, our flight path had taken us toward the overhead marshal stack and my left turn put me right in the thick of it. This didn't solve the problem either, so I raised the gear.

The next step in the PCL was to simply shut the engine down, which seemed like an incredibly good idea given the rate at which I was burning fuel. Interestingly, NATOPS took a backseat for a while as the plot thickened.

Now, there were several other interested parties involved in troubleshooting my situation, including the squadron tower rep, the air boss (of course!) and two other squadron members who were on deck preparing for the next launch. One of these squadronmates was the Ops O and the other was an LSO.

The debate centered around whether to shut the engine down with the gear up or down. Someone suspected that the engine might seize after being shut down from running at a high power setting. The right engine's hydraulics are the primary means to move the gear and leaving the gear up would have required relying on the backup system. Leaving the gear down used more fuel.

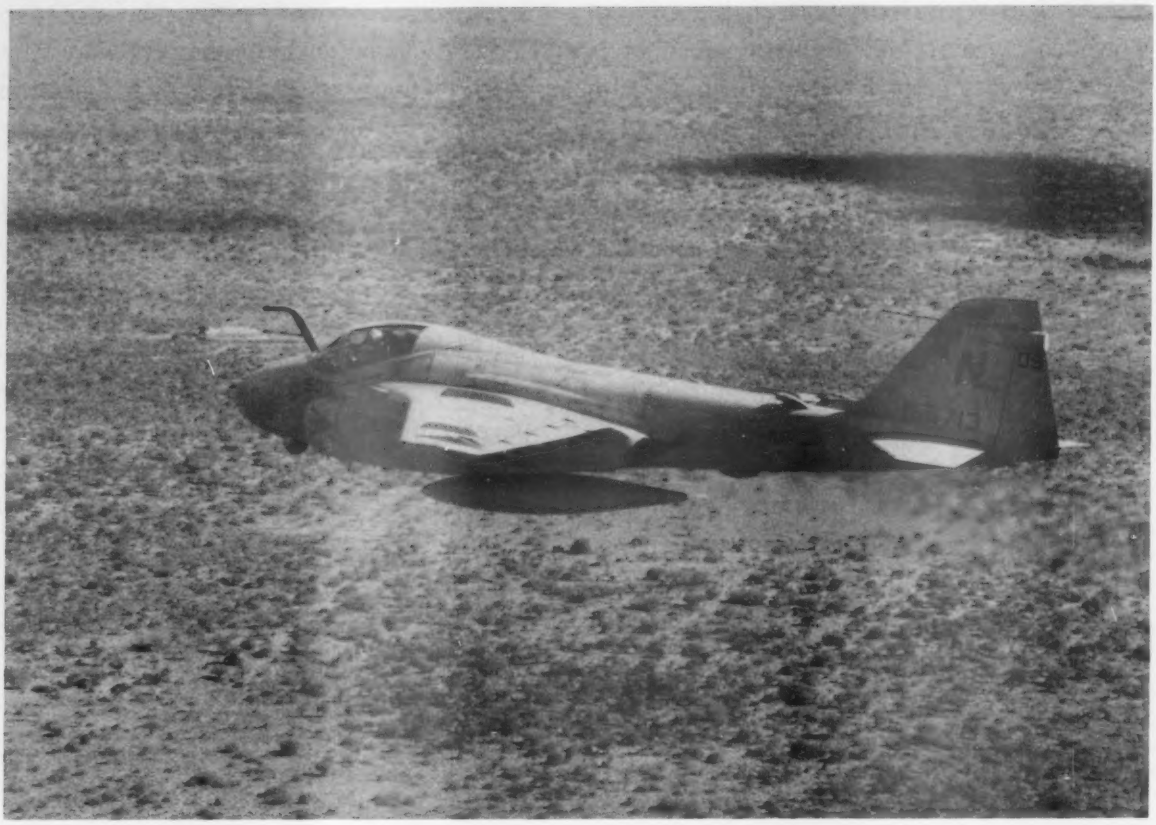
We weren't coming up with a quick solution because everyone was involved offering their advice. It took a while for me to remember that, as pilot in command, the decision was ultimately mine. I shut the engine down. It didn't seize and when it finally came time to land, the gear lowered normally by cross-bleeding to rotate the right engine. I made a single-engine recovery, which is harrowing even without a low-fuel state.

This incident had several lessons, some having to do with NATOPS and others on the hazards of group dynamics. It took a critical fuel situation for me to take control. My fuel state could also have been my undoing if I had not had a ready deck. It would have been difficult to justify my delayed reaction in front of the long, green table. Committee meetings and AOMs are not particularly effective, nor welcome, in the air. That even a relatively simple emergency could produce considerable confusion testifies to the complex nature of our profession. Taking the time, both individually and as a squadron, to nitpick through NATOPS and ask "what if?" will undoubtedly serve you better when the next crisis puts you under a microscope. ◄

Lt. Boyer is an F/A-18 pilot with VFA-195.

How to BOUNCE A BN

By Lt. M.S. Baden



"All right!"

That was the first thing that came to my mind as I read the next day's flight schedule. I was to fly a VR low level to the target area and practice visual deliveries. As if that weren't enough, I was also supposed to fly this quintessential Intruder hop with a fellow JO who had the reputation of being one of the best BNs in the squadron. With a little luck and some creative fuel planning, I figured that we could fly back to NAS Whidbey via another VR low level. This would be a fitting end to what was already shaping up to be a world-class flight.

The brief went well. I was glad to see that we were on the same track for this type of flight.

"I think we ought to run some pops on the tactical targets," I said.

"Roger. What do you say we run the convoys?"

It's flights like this you live for. We covered the timing, altitude restrictions and visual navigation procedures, as well as weapons deliveries and associated parameters. I noted with satisfaction how methodically my BN covered every detail of this great hop.

Of course, I expected nothing less. This was one of the reasons I liked flying with him. He was very good which meant I could relax in the cockpit.

A magnificent river gorge is undoubtedly the best part of this VR route and today was no exception. The true Americans in the two ski boats we passed waved as I rocked my wings in acknowledgement.

My BN told me about new headings, towers, powerlines, and other information. Because of his skill, I was able to fly the lower limits of the route. I didn't pay attention to the chart or the nav problem. I used terrain masking to the fullest. We were tactical to the max!

We neared the target range and my BN began the combat checklist, helping me transition to the weapons-delivery mode. I told him what I was looking for as I rehearsed the first attack profile.

We checked into the range and they cleared us in hot. The target looked a little different than the last time I saw it a month ago.

"Seven miles...Master Arm is on," I said.

"Four miles..." the BN called.

He expressed his opinion about my roll technique... He was not happy.

I saw the target and drove in until we looked to be in position for our first pop. We did a hard right-hand offset.

"Popping," I said.

The nose came up and my BN dutifully began chanting climb angles and altitudes. At the briefed altitude, I bent the aircraft around to put the nose on target. I fought the pipper and just couldn't seem to get it to fall on the target.

"Pull!" my BN called.

At 1,000 feet AGL, his call broke me away from my contest with the gunsight. I pickled and pulled.

"Well, that hit would have scared 'em," I said.

I wanted to redeem myself. We started the second run on the same profile as the first. The only difference was my

simmering anger because of our mediocre performance on the first run. The roll and pull to the target were more aggressive; in fact, they were violent.

"2,800 feet, 15 degrees," my BN said.

I had positioned the A-6 a little closer to the target than normal and waited until I was abeam the target to pull down.

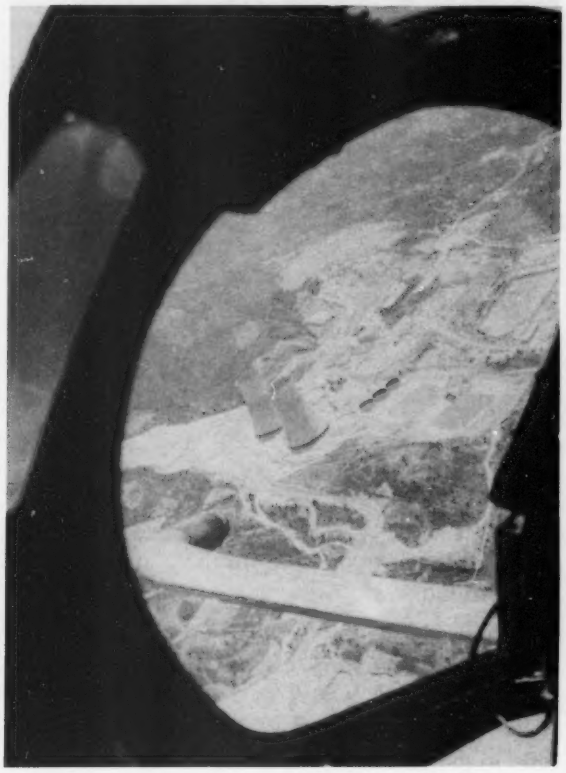
"The pipper still isn't tracking right," I exclaimed.

This time I made some very positive corrections. I slammed the wings back and forth as I worked the azimuth solution. The problem then became a matter of holding the pipper down. No call to pull came from my crewman. I was working the problem hard when the whole world started expanding around the center of the gunsight.

I instinctively jerked the stick into my lap. I heard myself grunt and felt the G-suit start to squeeze my legs harder than normal. The radar altimeter wound down to just below 200 feet and then started to go back up. The G-meter showed that I pulled considerably more than the four Gs I had planned.

My anger was gone and concern had replaced it.

As the hop continued in a calmer atmosphere, I thought about this profile and my right-seater's part in it. He expressed his opinion about my roll technique. Seems that during the roll-in, I bounced his head off the canopy. Also, I grayed him out during the pull off target. He was *not* happy.



In the debrief we discussed what had happened. He quit giving me altitude and dive angle information after his initial call because of my experiment in Newtonian physics involving his head and the canopy. We both agreed that I had concentrated too much on the pipper placement and that the rest of my scan was gone.

Why did I drop everything from my scan?

Because I was too comfortable with this BN. I figured that he had everything under control and I could just fly. That was true, but only to the point where his attention understandably was diverted because of my overzealous corrections. My fangs were out and his lights were out.

We both agreed that I relied on him for what was really the pilot's responsibility to fly the aircraft. I used him as a crutch to make up for my rusty bombing skills. ◄

Lt. Baden is an A-6 pilot with VA-95.

Please, Mr. Ball, Don't Go HIGH

By Lt. Clayton H. Ernst

My heart sank as I opened the hatch and saw the darkness of the northern Indian Ocean.

"Great," I thought, "twenty days since my last night trap and no moon!" Like many nuggets, I had developed the rare skill of being able to gauge the degree of darkness within seconds of stepping out onto the catwalk. Simply put, if you needed a flashlight to use the ladder to the flight deck, it was very dark; tonight I needed a floodlight.

My BN and I preflighted and manned up. Since my regular BN had the duty, I was forced to regain my night currency with someone I had never flown with. The translant had disrupted everyone's normal routines because all our flying was now sandwiched into the one or two remaining fly-days. But, after sitting in the cockpit for several minutes, my confidence began to return.

"Good shot," my BN called as we launched into the night sky. A few stabs at the KC-135 and 10 Mk-76s later, we were in the marshal stack awaiting recovery.

As we orbited, I noticed how rusty my instrument scan was after three weeks of movies and paperwork. This was work and we hadn't even pushed yet. The butterflies in my stomach only increased as we switched up the final approach frequency.

"Power, power!" the LSOs screamed at the aircraft 12 miles ahead of me. "Waveoff!" I could tell from their voices that the air wing was in rare form tonight.

"Okay," I thought, "needles are up and right. Scan, scan, scan. Only three more minutes and I'll be on deck listening to the show." Four miles, looking good. Oh, no! We hadn't dumped yet. We were still 1,500 pounds above max trap.

"Fuselage dumps are on," I said to my BN as I struggled to regain some semblance of a normal scan. By the time my eyes refocused on the instruments, we had drifted left once again and had already begun to fly through the glidepath. No problem. Reduce power, a little wing dip. Good, the correction is working. OK, I was fast, a little high, the needles were coming back. One mile, still a little left...what? Oh yeah, the dumps were off.

"Three-quarters of a miles, call the ball," the controller said. Boy, it was dark. A little power for Mom, a little power for Dad. Please, Mr. Ball, don't go high!

"Bolter, bolter!" the LSOs screamed.

"Intruder on the bolter, check your dumps *off*!" The air boss's voice was well known. I looked down at the fuel-control panel once we had established our climb. The fuselage dump switch was still on! I had thrown the adjacent Fuel Ready switch instead; now, we were trick or treat.

"I guess I really did it this time," I thought and looked over to my BN who was speechless. We tried to ignore the recovery tanker that was maneuvering into position on our right side and concentrated on flying a safe approach, this time to an OK 3-wire.

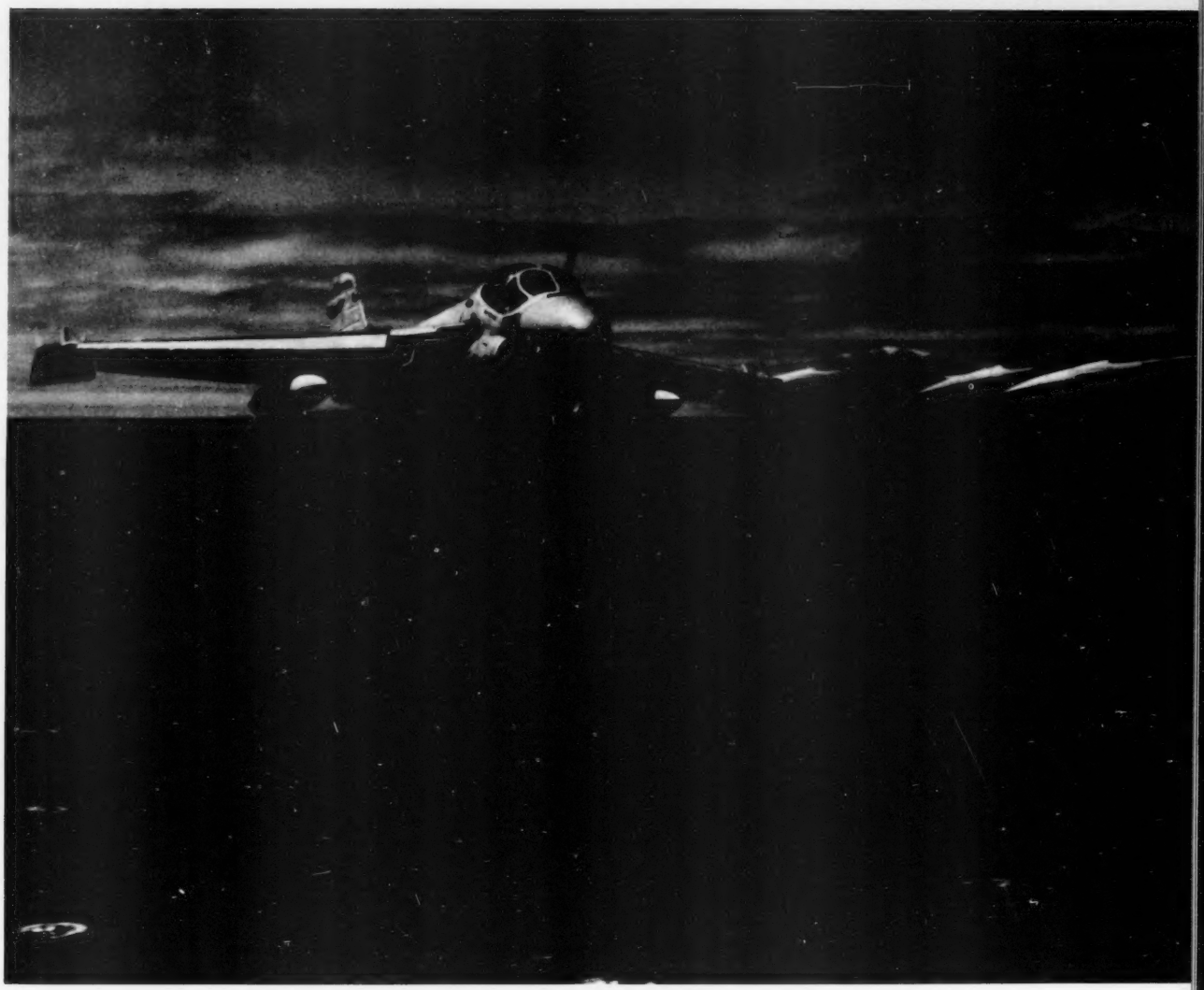
Back in the ready room, everyone was looking at us as we opened the door. No one had to tell me that the CO wanted to see us immediately. After I fumbled through an explanation of how I had put his aircraft in trouble, I thought about the mistakes we had made.

First, the long layoff had not only made my scan rusty but had affected my procedures too. As my inevitable night trap approached, I found myself looking more closely at when the moon would rise and set instead of CV NATOPS procedures. Second, our brief glossed over too many critical items for an aircrew who had never flown together. Some of the topics we failed to discuss in our brief were fuel management, tanking, and bingo procedures.

Finally, as a veteran of a full set of workups, I was overconfident and felt I was invincible. If this situation happened to me again, I would consider asking for a 360 for fuel management purposes instead of trying to hack it.

If fear of failure is one of man's greatest motivators, than fear of not getting aboard must be a close second. ◄

Lt. Ernst is an A-6 pilot with VA-65.



Just One Thing After Another...

...and Another

By LCdr. Steve Tisdale

It was a beautiful day on the mining range: not a cloud in the sky. The islands and countryside we crossed were like a postcard picture. We had all observers posted, with extra observers, including me, in the cockpit. A lot of bugsmashers usually hang out at low altitude around here so we kept a sharp lookout as we headed in for a mining run.

About 10 miles from the drop point at 300 feet, we accelerated to our drop speed of 300 knots. At five miles out I heard the telltale bang and felt the slight shudder that characterized the opening of the bomb-bay doors. I thought it was a little far out for the doors to open but decided that the pilot just wanted time to stabilize speed with the additional drag. Suddenly, the flight engineer called, "Loss of power in No. 2!"

The port aft observer called, "Fire in No. 2 engine!" The day had suddenly begun turning brown.

The crew quickly ran through NATOPS procedures as they E-handled No. 2 and dumped the HRD into it. Their actions were so smooth and quick I could barely follow the flow. In an instant, No. 2's prop was feathered and there were no other fire indications. We had converted speed to altitude and climbed from 300 feet to a safer 1,500 feet, remaining within our altitude restriction on the range.

We had the local NAS in sight only 15 miles north of us. We declared an emergency and reviewed our options for the best approach.

Two things were apparent. Because we had just arrived on station with fuel for more than five hours, we were heavier than normal, although we were below maximum gross weight for landing. We were also carrying some 4,000 pounds of inert shapes, it seemed best to jettison them so that we wouldn't have to carry the extra weight. The P-3C has no trouble flying on three engines so we informed ATC we would stay on the range briefly to jettison our load then head for our emergency field. We jettisoned the stores, except for one that hung up on an outboard port wing station.

We told ATC about our hung store and that we would need a little more time to try to drop it. After going through NATOPS for hung stores, which included trying wing-only jettison, a normal drop from that wing station, and pulling Gs, the shape remained stubbornly in place.

I vividly remember seeing the load on that station early that morning. The forward latch hook had resisted several tries to latch it until the AO chief "persuaded" it. I had a vision of the store hanging by the forward latch hook but didn't tell the flight station to be extra careful to avoid flying over the many pleasure boats below us since they were already maneuvering to stay away from them.

Now we needed an over-water approach. The only approach which would get us in over water required a downwind landing to the shortest runway. We told ATC and they gave us vectors to the initial approach fix. The approach was uneventful but the tail wind complicated the landing. On touchdown, the stubborn shape released its grip. I watched the blue store drop off the wing and told the flight station.

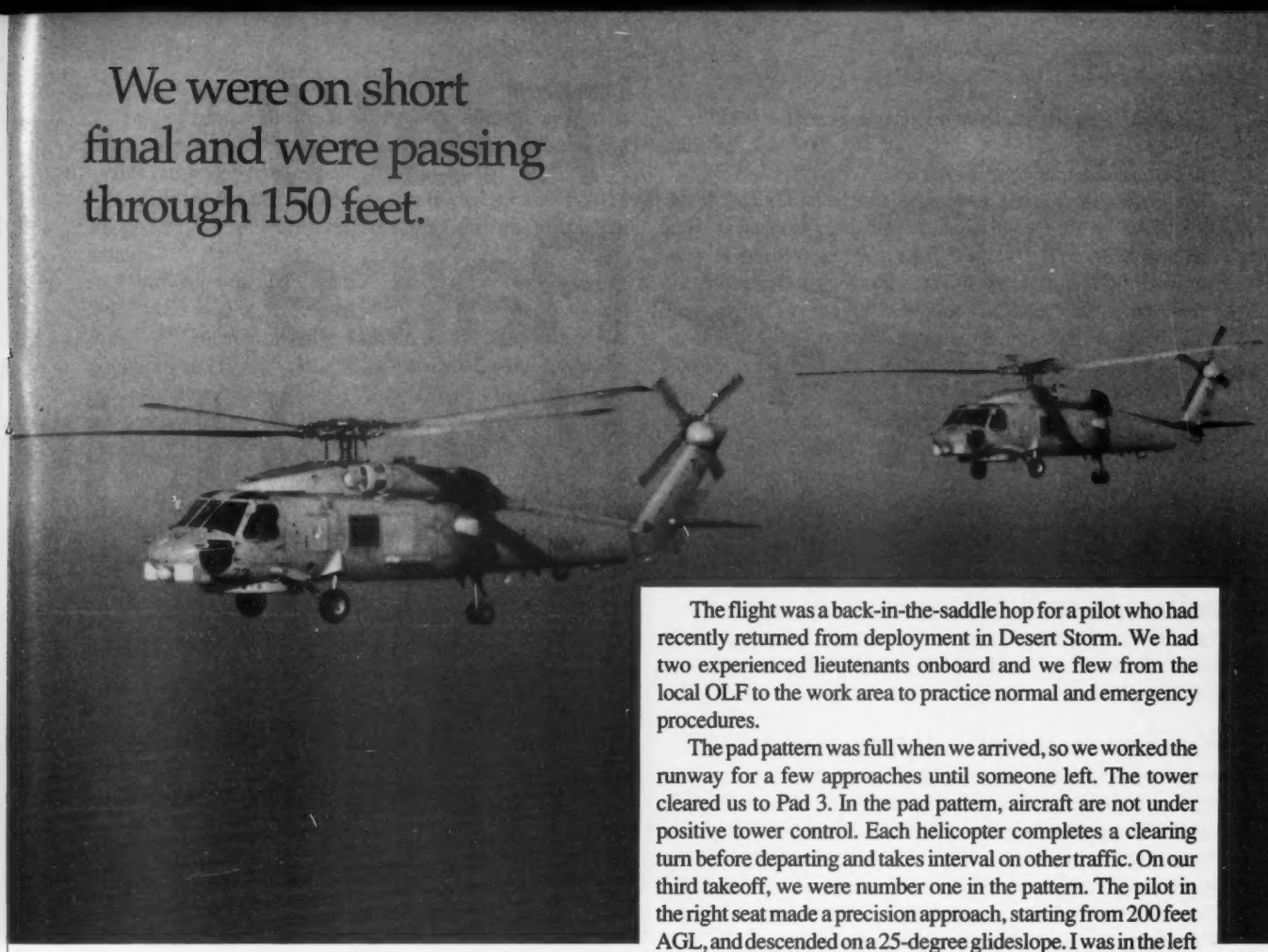
Fortunately, the retard fins popped open and the shape chased us down the runway for only a short distance. The combination of a heavy landing, the tail wind and the short runway required excessive breaking to bring the plane to a stop. The final incident of the day—hot brakes—kept us at the hold-short area while ground emergency crews brought in fans to cool the brakes. (No. 2 engine was, of course, unavailable.) There was no brake fire and the crew waited out the cool-down process on board rather than adding a ground-emergency egress to the list of the day's activities.

We left the aircraft and inspected the remarkably large number of pieces of compressor blades that the engine had thrown out the fifth-stage blowout valves. I realized then that the bomb-bay doors had *never* opened. The bang and shudder I heard and felt were the gas-turbine engine destroying itself.

If an ordnance station doesn't behave as it should during preflight loading, there may be a good reason. We couldn't duplicate the problem after the flight and we attributed it to over-tightened sway braces. I still remembered how stubborn that forward latch hook was. If I had been more suspicious, we might have avoided using that station, or gone through more trouble-shooting before we took off. ◀

LCdr. Tisdale is a P-3C TACCO and mission commander with VP-50.

We were on short final and were passing through 150 feet.



I Survived A Helo Midair

By Lt. Bruce Hensel

The flight was a back-in-the-saddle hop for a pilot who had recently returned from deployment in Desert Storm. We had two experienced lieutenants onboard and we flew from the local OLF to the work area to practice normal and emergency procedures.

The pad pattern was full when we arrived, so we worked the runway for a few approaches until someone left. The tower cleared us to Pad 3. In the pad pattern, aircraft are not under positive tower control. Each helicopter completes a clearing turn before departing and takes interval on other traffic. On our third takeoff, we were number one in the pattern. The pilot in the right seat made a precision approach, starting from 200 feet AGL, and descended on a 25-degree glideslope. I was in the left seat and was looking outside for glideslope and inside for rate of descent. We were on short final and were passing through 150 feet.

Suddenly, I saw another H-60 crossing left to right, in front and below us, less than 50 feet from us. The pilot at the controls also saw the danger and jerked the nose up as he pulled collective. We heard and felt a thump. Surprised that we were still flying, we descended and finally landed. The other helo pulled into a hover on the adjacent pad on our right.

I told my aircrewman to check for damage and he discovered that the main rotor blades of the other helo had sliced through two antennas on the nose of our aircraft. The other H-60 shut down and its crews found a damaged blade tip cap.

The second helicopter had been behind us in the pattern making a simulated single-engine approach. They had not seen us when they made their turn toward the pad. The student pilot in the plane saw us at the last moment. The only thing that prevented a class A mishap was evasive action by both aircrews.

When flying VFR, you must do more than see and avoid. You must know where all aircraft are in the pattern and maintain your interval. ◀

Lt. Hensel flew SH-60s with HSL-43. He is now with HSL-41.

That'll Raise Your Hair

By Lt. Andrew P. Monson

I was in the ready room trying to put a dent in the never-ending stack of paperwork. The PLAT was on the television as the first night recovery began. It was just another night CQ.

This was the first of many at-sea periods for the air wing on an older, smaller-class ship. She was almost the same as our former carrier except for a couple of important differences. The first was that there was 40 less feet between the rounddown and the dreaded 1-wire. The second difference was that the burble was closer to the ship, making it harder to correct for the accompanying settle.

For the past few days, all the bubbas had been sharpening the skills that we hadn't used for a month. One-wires and bolters were common but we were slowly getting used to our new home.

The seas looked calm that clear night, but the swells were coming from 30 degrees off the direction of the prevailing winds, giving the ship an unpredictable roll and pitch everytime we turned into the wind to recover aircraft.

We weren't paying too much attention to the PLAT until someone exclaimed, "Hey! That Tomcat just flew right over the LSO platform!" An F-14 had gotten a good right-to-left drift going, waving off over the LSOs. Everyone was now watching. The next trap was normal as the Tomcat that waved off was now turning in for another try.

With the deck pitching, the RIO called the ball. Soon, the LSO called, "A little power, power!" as the jet smacked onto the deck depositing fiberglass all over the fantail as the ventrals were ground down on the nonskid. A combat FOD walkdown ended the excitement for that recovery.

As the next recovery approached, I decided to have a front-row seat when it began. With the deck still moving, the first couple of Hornets landed without a problem. I was beginning to pay less attention as the next Hornet called the ball. I looked up just in time to see him going high as the deck went down, causing the F/A-18 to bolter long.

The main gear touched down well past the 4-wire and by the time the nose gear came down, there was no deck left. The aircraft left the angle in a 2-3-degree nose-down attitude, almost disappearing when the main mounts rolled off the deck.

I expected to see an ejection seat rocket into the air, but the two afterburner plumes and aircraft lights rising into the air told us that our buddy had made it.

As the tension in the ready room subsided, another F/A-18 trapped and the first Hornet boltered again, this time in standard fashion.

We were now glued to the television for every pass. A Viking was next up. He called the ball and everything looked fine. The S-3 started climbing in the middle just as the deck was going down. High in-close, with the deck down, the ready-room spectators were yelling, "See ya! He's outta here!"

To our surprise, no waveoff came and the S-3 looked more like a Harrier coming in for a vertical landing. He came down as the deck rose, creating a collision that would have sent a Hornet's gear all over the flight deck.

The first F/A-18 now came around for his third try and he taxied into the 1-wire. Taxi one or not, we all knew he was glad to be back onboard.

"How much more exciting can one night be?" we asked ourselves as a few more jets landed and we filled a few more coffee cups.

"EA-6B, three-quarters of a mile, call the ball," the LSO called.

"Prowler, ball, 7.0," the EA-6B replied. As he started to decel, the LSO called for a little power. The aircraft was low and slow as the deck rose, making it disappear off the PLAT.

"Power! Power! Waveoff! Waveoff!" The calls came as the pilot rammed the throttles to mil and held his AOA. Having done all that he could, the pilot said later that he was just standing by to eject. The plane was climbing as it missed a hook slap by inches. Everyone in the ready room was silent, trying to understand what had just happened. It was the closest I had come to seeing someone die and that's as close as I want to get. The Prowler landed on the next pass, ending the most hair-raising night I had ever seen. I was glad to be a spectator, not a participant.

The air wing was lucky that night. Most of the pilots were cruise veterans. Would the outcome have been different if they were less experienced? After going through a set of workups, an IO-Westpac cruise, APCEX and RIMPAC, I never thought I'd see anything like that, especially in our own backyard. ◄

Lt. Monson is an F/A-18 pilot with VFA-113.

PH2 Rory Knepp

162979's Last Flight

By LCdr. Jim Reynolds

It was 1600 and I was getting ready for another standard preflight brief with my HAC. Tonight's ASW was going to be a real challenge: looking for the bad guys with the aircraft carrier. Our destroyer squadron was just wrapping up four months of independent high-tempo ASW operations. At this point in our cruise, I felt confident in our tactical abilities. I was ready and eager to do the job.

At 1605, we began our brief. The HAC was very meticulous and reviewed every step in the checklist. He covered every possible emergency in great detail.

"In the event of an emergency," he said, "the pilot at the controls will fly the aircraft and the copilot will execute all compulsory memory items..."

I had sat through this brief so many times that I was able to recite it with only occasional glances at the checklists. Little did I know how important this conditioning would be that night.

After a normal hot seat at 1800, we asked for clearance to launch. Because of clobbered radio frequencies, we were put on hold. Finally, after one hour of waiting, we were told to shut down; the mission was canceled.

No sooner had we shut down when the LSO emerged from the platform and told us that the mission was on again. We manned up again and started the checklists, trying to quickly but safely leave the deck before someone changed their minds. To complicate things, we remained on the deck for 15 minutes waiting for the secure communications gear to be loaded and reloaded until it worked.

We finally launched. There was no horizon. It was one of

PH3 John H. Hackersmith

those black nights. The takeoff was normal and we leveled off at our briefed altitude of 500 feet. We finished the post-takeoff checklists and, as the airborne tactical control officer (ATO), I tried to establish data link with a sister helo in the squadron.

We went north toward the host ship to mark on top and align the navigation systems. A bright, yellow glow from the master caution warning panel snapped my head out of the multi-purpose display (MPD) like Mike Tyson's right hook. I checked the master caution panel and saw LOW XMSN OIL PRESS. Worse, there *was* no oil pressure.

My training kicked in.

"Hey, the transmission is rated to run with no oil pressure for 30 minutes. No sweat," I thought. We declared an emergency and squawked 7700 on the transponder. The HAC turned toward the ship which was only 10 miles away and set up for an immediate landing while I performed all the steps in the PCL. All the checks, that is, except shutting down the main generators. By keeping the main generators on line, the navigation computer would still function and the flotation bags would still be armed.

It was 2000. We went down to 80 feet and 80 knots as required by NATOPS. We were about nine miles from the ship. A 30-knot headwind reduced our ground speed to 50 knots. As we closed the ship, the crew went to emergency flight quarters.

Our transmission sounded like a kitchen garbage disposal going bad. The sound was increasing quickly and my confidence was diminishing quickly. In the back, our sensor operator told us there was transmission oil streaming down from the

I am convinced that our survival was no fluke.

overhead panels.

Time passed slowly and it seemed like we were barely closing the ship. I called out the remaining miles and my confidence rose; only a few miles left. At two miles to go, the ship's lights were right off our nose. Suddenly, the noise increased by 300 percent. The HAC shouted, "Ocean Lord 21 is ditching, ditching, ditching!"

He flared at 80 feet and 80 knots. I couldn't figure out why we had to ditch except for the huge sound increase. I shouted over the ICS, "Keep going, keep going!"

At 60 feet, my words sank in and he leveled off, pulling power to keep us out of the water. Suddenly, something was very wrong and I was pressed to the left side of my seat. Instinctively, I realized that we had just lost the tail rotor drive, although none of us inside the helicopter said anything. Outside, everything was a blur.

I immediately pulled my scan to the radar altimeter and VSI. Hearing the pilot call for the power controls at 30 feet, I shut them off. I could see the water coming up. The sight was not a pretty one. Instead of being level, we were 15-20 degrees left wing down, and the nose was down 10-20 degrees. The water impact was not as hard as I had expected and I immediately saw a flash of light as the APU generator picked up the load. Milliseconds later, the lights were gone when the APU quit. Blackness and the water arrived simultaneously. Thankfully we were off a southern Pacific island chain and the water was a balmy 75 degrees.

Silence...I tried to open my emergency window but it wouldn't budge. After several tries, I had to have air. I put the HEEDS up to my mouth and charged the regulator to clear out all the water.

I didn't know I was upside down and the regulator was full of water. (It needs to be upright to clear itself of water.) I took a desperation breath and got a fair amount of salt water, but also air. Life looked a little better.

My last herculean effort with the window was successful. The water pressure was now equal inside and outside the helicopter. Using procedures I learned in the helo dunker, I kept my hand on a reference point and released my harness. I pulled myself through the window; I was almost free but my left leg pocket's zipper caught on the emergency release handle for the windshield. (My zipper was open because I had failed to rezip it after removing a brief sheet for the mission.)

I was unable to shake my leg free and I pulled myself partially back into the helicopter and freed the pocket.

Once free of the aircraft, I had no clue as to what was up or down, so I inflated my life preserver unit and almost immediately, I emerged from the depths. I saw the helo upside down, nose low, less than 10 feet from me. I thought I was the only one to get out. What an awful feeling.

Thirty mile-per-hour winds had whipped up the seas to 12-15-foot breaking swells, a sea state of about 5. Looking for the other two crewmen was hard. I took my flashlight from my vest and was pleasantly surprised to find it was still working. When the emergency had started, the flashlight had been mounted on the dash but during the emergency, I had reattached it to my vest. Perhaps I'd had a premonition of things to come.

Holding the light and shouting as loud as I could, I finally saw the reflection of my HAC's helmet. I was relieved that he had made it out and we kept shouting for our SENSO. After 30 seconds, we heard him as he swam toward us.

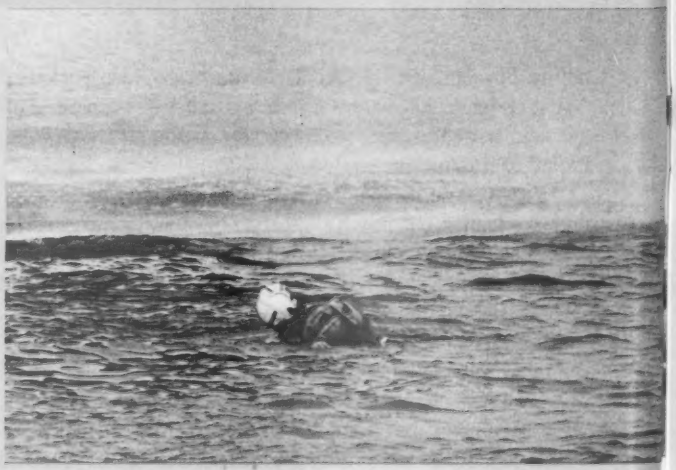
We tried to connect ourselves together with the inner lobes of our life vests, just as we learned in survival training. At that point, I discovered that the right lobe to the other pilot's life vest was not inflated. Thankfully, his second try was successful and the vest inflated with a hiss.

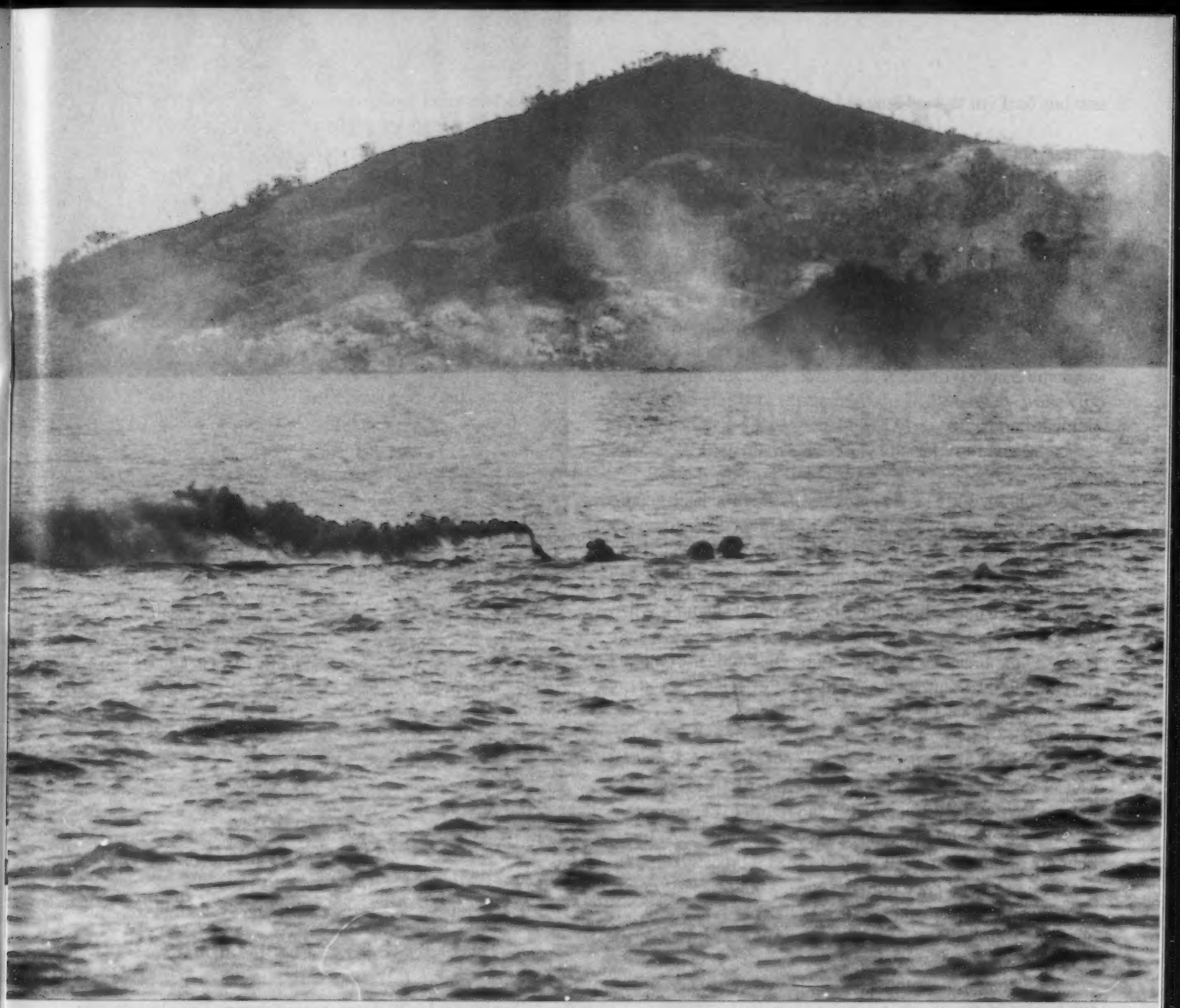
Now that we were all connected we were able to stabilize ourselves in the swells and concentrate on communicating with an S-3 from the carrier. We saw him as he orbited our position and we shot off several flares.

My flashlight proved indispensable. It made it relatively easy to see what we were doing and even though we knew where all the items were in our vests, the inflated lobes made it difficult to reach into the pockets. The flashlight also let us see if any of us were hurt and bleeding, which we were not.

The seas were really rough and without the flashlight to warn us when the next swell was coming, we would have had a rougher time than we did.

By now the helicopter was gone. It had only been five minutes since our emergency began, but it seemed a lot longer. Looking toward the horizon, we could see the ship heading for us. What a great sight. All its lights were lit and it looked like a cruise ship not a destroyer. The approach took forever. About an hour after we hit the water, we were pulled onboard.





I am convinced that our survival was no fluke. First, and most important, throughout this emergency we performed in the cockpit as we had briefed. Because of repetition and a thorough brief, there was no doubt as to who would fly and who would troubleshoot. Also, copilot duties were ingrained as a compulsory emergency procedure and under the extreme pressure, I went through them without hesitation.

The second most important factor in our survival was the continuous flow of information inside the cockpit and the information we transmitted to the ship and rescue units. I had to force myself to try to do all that was expected and then communicate with the HAC. I feel strongly that Navy aircrew coordination training (ACT) conditioned us to work under stress. The training was essential in this, and other, emergencies.

The mechanical failure—we suspect a ruptured pressure line—did not duplicate the Sikorsky ground test. Therefore, take note: NATOPS may not cover the emergency you experience. As the situation develops, you need to decide what procedures apply to your emergency.

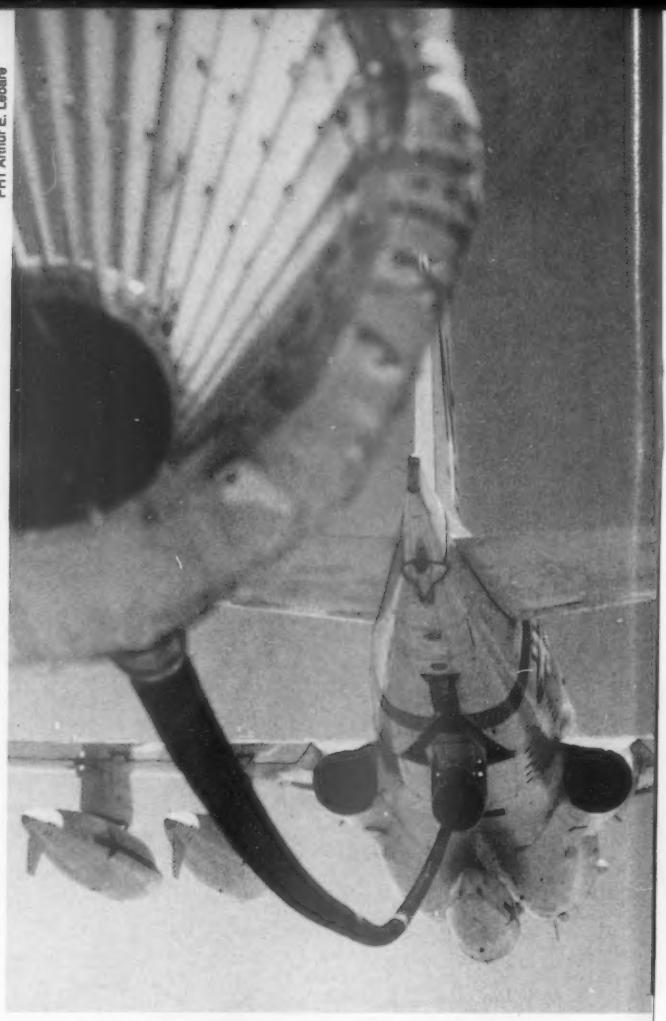
If I had reclosed my zipper, I could have been free of the aircraft sooner. Also, I should have had my hand on the toggle switch ready to inflate the floats and should have done so before moving my hand to secure the engines. These actions might have kept the helicopter upright for another 5-10 seconds, making my exit easier.

We survived because of training, not luck. Good, repetitive training drives home basic procedures that become instinct under stress. I am grateful that we train so much. So is my family. ◄

LCdr. Reynolds is the OINC of HSL-43's Det 10.

Two Heads Are Better Than One

By Lt. James D. Eberhart



PH1 Arthur E. Labare

The argument about two-seat versus single-seat cockpits has gone on much longer than I have been in naval aviation. When it was time to put my preference on paper, I picked two-seaters because I thought they would be more survivable in combat. I never thought I would look back to say my decision saved my life on a routine tanker rendezvous at night.

My RIO, Lt. Eric Jungck, and I took off from USS *Nimitz* (CVN-68) for a 4.5-hour CAP mission over Iraq. We joined on a KC-135 to tank and then began our patrol. After 1.5 hours, we returned to the KC-135 to top off and return to the carrier.

We checked into marshal and pushed on time. At three-quarters of a mile, my RIO called, "106, Tomcat, ball, 5.0." Everything looked good until the waveoff lights came on.

"Waveoff, foul deck," the LSO called.

"No problem," I told my RIO, "we'll be priority gas on the ball next pass, however."

Next time around, I looked good, over-controlled a settle in-close, and..."Bolter, bolter."

"106, your signal is tank," the ship called.

I was still above tank fuel but they were probably just playing it safe. It was really dark with no moon.

"Tanker is at your right, two o'clock, 106."

"Tally ho," I called. I cleaned up the aircraft and climbed. I leveled at 3,000 feet, which was supposed to be the tanker's altitude, but we were still looking up at my high two o'clock.

"Confirm the tanker's altitude," I told my RIO.

Departure then told the tanker to descend to the right altitude. Meantime, I had started to climb. Sensing that he was now descending, I pulled power and dumped the nose because the closure seemed excessive.

I realized I was looking up at too great an angle, almost over my shoulder. My RIO yelled, "Watch your altitude!" I went immediately to my attitude indicator and saw I was in a slight bank, but about 15-20 degrees nose down. The altitude was rapidly passing 1,200 feet. I leveled my wings and pulled maximum AOA to recover.

"Thanks," I said to my RIO, "you just saved our lives."

"Thanks," I said to my RIO, "you just saved our lives."

I realized later that this scenario was right out of aviation physiology's session on night disorientation and vertigo. If it had not been for my RIO, we would have flown into the water. I can imagine the mishap report: F-14 flew into the water. Night mission. No radio transmissions heard, cause unknown.

The lesson is simple: If something doesn't seem right or is non-standard, stabilize for a minute and assess your situation. Get your bearings and then go ahead. Also, keep up your scan, both as a crew and individually, so that you don't end up as a mishap statistic. I don't hesitate to say I am thankful that I fly a two-seat aircraft because two heads are better than one. ◄

Lt. Eberhart is an F-14B pilot with VF-211.

The Dull Thud

By Lt. C.J. Deni

The mission was day practice plugs. I was fresh out of the FRS, excited about finally being in a fleet squadron and confident that I could carry out what I considered a basic hop.

The takeoff and initial rendezvous went fine. My RIO locked the tanker and kept me informed of its position. As a result, I wasn't surprised when my lead went into a level turn away from me to consummate the final portion of the intercept with the KA-6.

I didn't turn to the inside of my lead's radius as soon as I should have, and found myself too far back after 90 degrees of turn. In my rush to get back into position, I developed too much closure on Dash 1. I pulled the power back to idle and threw the boards out, but I was still getting too close to the lead aircraft.

Instead of underrunning, which in hindsight would have been the correct thing to do, I dropped below my lead and tried to hack the turn with him. As this point, I was under the lead and still moving in front of him. I forced myself into flying formation looking through the *top* of my canopy.

I lost situational awareness on how close we were to the tanker. I tried to take a quick look to my right. The tanker was still a good distance away. I looked back at my lead and was shocked to see we were about to collide!

I pushed forward on the stick. As I did so, the Tomcat pivoted about the lateral axis and one of its vertical stabs jammed into the bottom of the lead jet. The dull thud shot through me like 115 volts.

"Are you OK? Are you OK?" lead called. As I continued away from him, I answered that we were OK and took stock of my situation. The aircraft seemed to be flying and all the gauges looked normal. I could see fuel streaming from the bottom of the lead plane and he told me that the top of my starboard vertical tail was badly damaged. We both declared emergencies and headed back to our field which, fortunately, wasn't too far away. On the way back, I did a slow-speed controllability check. We both recovered safely about 10 minutes later.

Basic formation flying skills are expected by the time a nugget reaches the fleet, but no portion of a hop should be taken for granted. I should have seen things getting out of hand and taken the safe way out. An underrun isn't as embarrassing and potentially career threatening as hitting your lead. ◄

Lt. Deni is an F-14B pilot with VF-143.

Peter Mersky

Simulator Sickness Revisited

By LCdr. Andy Bellenkes

Shortly after starting a static simulator, a CH-46 pilot with more than 500 hours in type becomes nauseated, sweaty and unable to concentrate on his tasks – all symptoms of motion sickness. He can't continue the mission and terminates the session. He recovers in the flight surgeon's office. In a short time, he is feeling fine.

Even though the pilot has never experienced motion sickness before in any aircraft, subsequent static-simulator missions end prematurely because he becomes ill.

An F-14 pilot flies an uneventful dynamic-simulator mission. Six hours later, while driving home, he suddenly feels like he is being catapulted off the ship. He becomes disoriented and loses control of his car. He ends up unhurt, in a ditch.

Unusual examples? Hardly. More and more aviators are reporting discomfort or sickness during and after simulator sessions. The impact of simulator sickness on pilot proficiency, training and fleet readiness has prompted the Navy to investigate the problem's causes and possible cures.

Briefly, simulator sickness occurs as a result of a sensory mismatch; that is, a conflict between what an aviator with lots of hours expects to see and feel in the simulator as opposed to what he actually experiences.

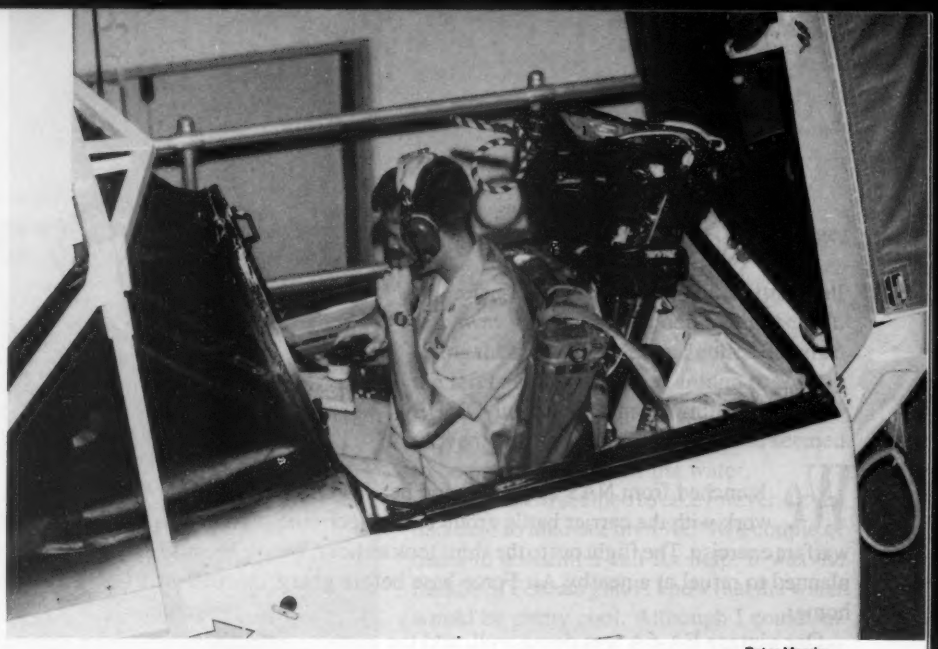
For instance, a nugget aviator with little flight time flying the simulator for the first time will likely feel little discomfort. He has no expectations of what he should feel during the many phases of actual flight. In this case, it doesn't matter whether or not the simulator accurately reproduces the physiological experience of flight.

In other cases, the simulator's designed performance (such as timing cockpit motion with flight control inputs and the visual scene) may not be accurate. Here, even the slightest time-based deviation from the visual scene can result in perceptual confusion. Again, the brain is not able to accurately establish a cause-effect relationship between what is seen and what is felt. Regardless of the origin of this mismatch, the result is the symptoms similar to those experienced during motion sickness, such as headache, pallor, vertigo, loss of situational awareness

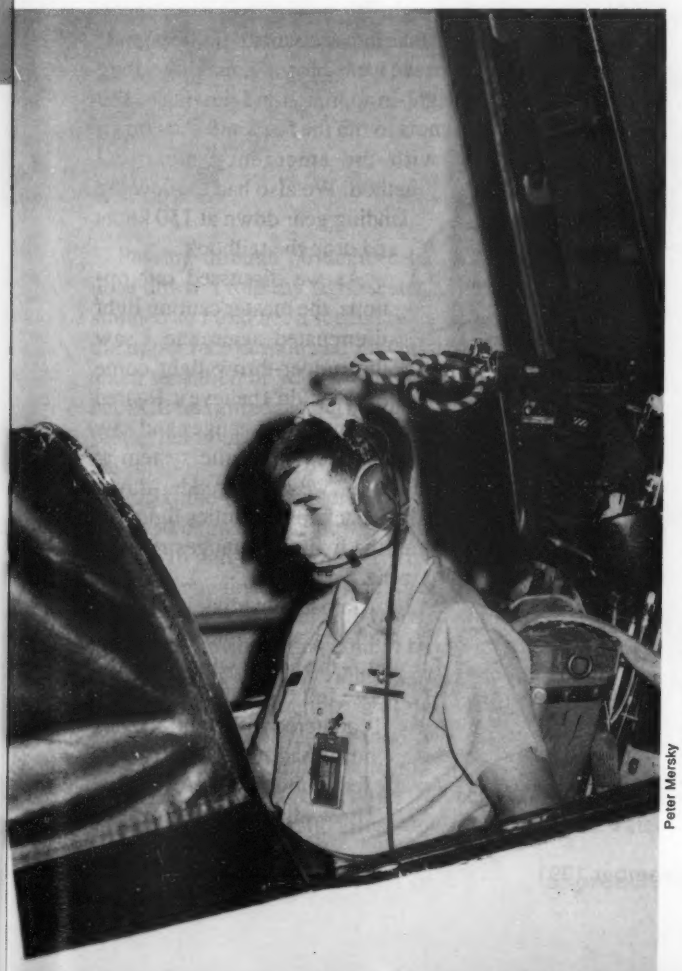
and nausea.

There are a number of variables that can affect the onset, strength, and postflight course of simulator sickness. These include how much sleep the aviator got, what he ate, emotional state and or if he doesn't feel well, the nature of the mission and the type of simulator flown. The effects of simulator sickness also vary with the individual.

Simulator sickness does not always happen during the session. There have been several instances where the individual flew the mission and was fine in the simulator, only to become ill as long as 24 hours after the flight. While the cause of this delayed onset is a mystery, the implications for actual flight and postflight activities are apparent: degraded performance can lead to a mishap.



Peter Mersky



Peter Mersky

The Naval Safety Instruction (OPNAVINST 3710.7) defines the nature and scope of simulator sickness. It discusses the problem of the amount of time from a simulator hop to an actual flight, noting that flight personnel who have felt sick in the simulator should be relieved of flight duties for the rest of the same day as the simulator hop.

The responsibility for implementing this instruction has often been left to the local command's safety officer or flight surgeon. Traditionally, these commands have adopted policies where as a pilot becomes more familiar with the simulator, he requires less time between the simulator and his flight.

What is the optimum interval time? The Naval Safety Center suggests eight to 12 hours. The Safety Center's Aeromedical Division staff is investigating reports of simulator-sickness episodes from all aviation communities. The Safety Center's fleet-wide safety surveys also gather data. Aeromedical surveyors interview squadron safety personnel, specifically asking about occurrences of simulator sickness. These interviews also provide the squadrons with the latest information about simulator sickness: the operational problems it can cause, its symptoms, and its impact on performance. Surveyors also stress the unpredictability of delayed symptoms that make a policy of short time intervals between simulator sessions and flights chancey. Squadron safety personnel are also asked to forward any subsequent reports of simulator sickness to the Safety Center by telephone or mail. This information will eventually provide the fleet with better benchmarks to determine the best time between simulator and flight. ◀

LCdr. Bellenkes is head of the Naval Safety Center's Human Factors Engineering Branch.

Fun With Hydraulics

By LCdr. Stan Parsons

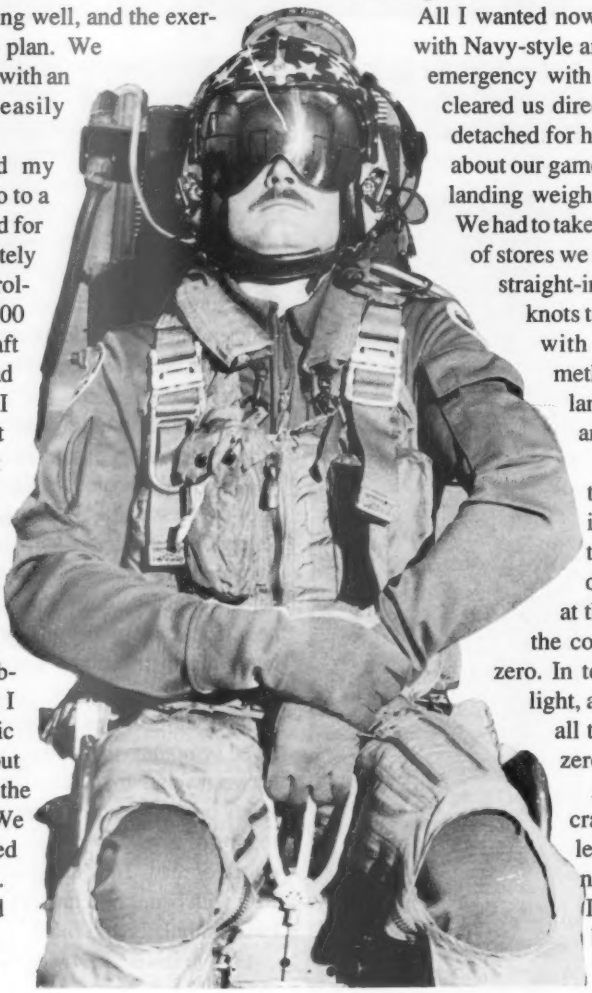
We launched from NAS Key West and headed out to work with the carrier battle group on an electronic warfare exercise. The flight out to the ships took an hour; we planned to refuel at a nearby Air Force base before going home.

Our vintage EA-6A was doing well, and the exercise was going according to plan. We carried various electronic pods with an asymmetric load that we easily trimmed out for the flight.

After we finished, I told my wingman to rendezvous then go to a cruise position. Then we headed for the Air Force base, approximately 200 miles away. The area controller cleared us on our way at 15,000 feet. Suddenly, I felt the aircraft fishtail and I thought that I had flown through mild jetwash. I noticed the master caution light flashing, however, and saw that the backup hydraulics light was lit on the annunciator panel.

I didn't want to, but I checked my hydraulic gauges and found that the system indicated zero. I called my wingman, who suspected that we had a problem when he saw us fishtailing. I told him we had a flight-hydraulic failure. My right-seater pulled out her PCL and told me to secure the automatic flight control system. We were at 300 knots, so I also pulled the throttles back to slow down.

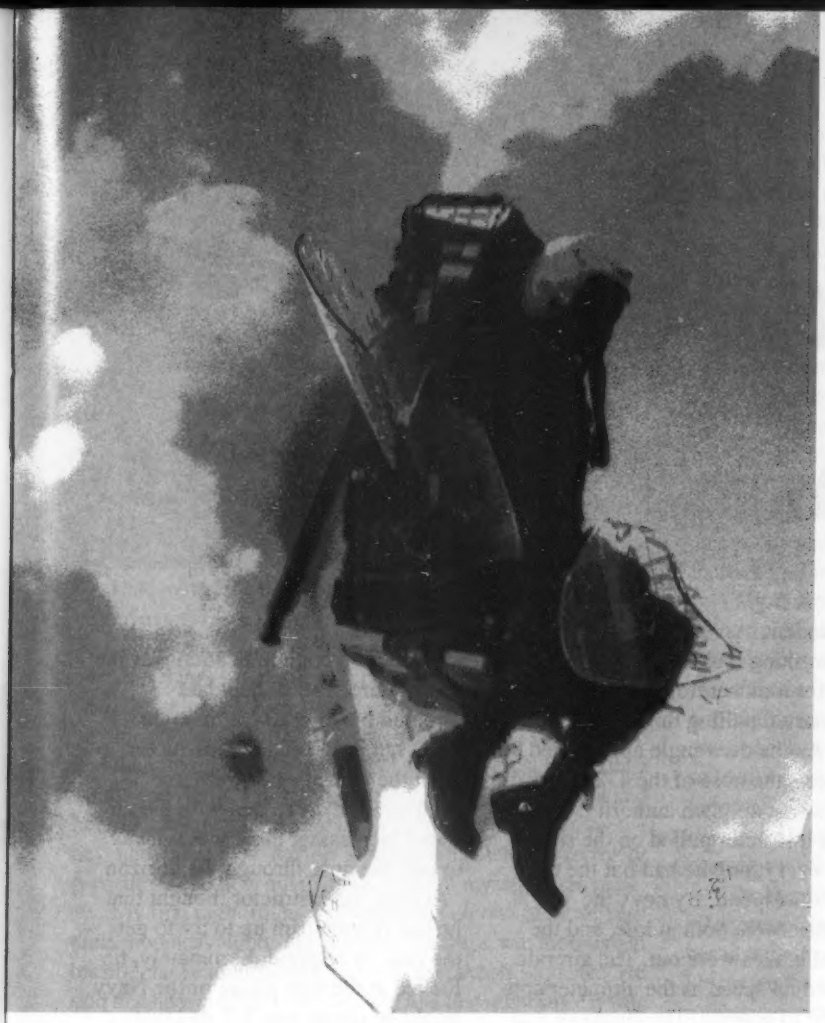
My wingman and I discussed our options and decided that the arresting gear at the AFB was not enough for the arrested landing we would need. Moreover, there was a Navy base that was closer. Ironically, the base was closed that day because of a major fuel spill. During our flight brief, we had discussed that the Navy field would not be useable for refueling.



All I wanted now though was a clear runway with Navy-style arresting gear. We declared an emergency with the range controller and he cleared us direct to the NAS. My wingman detached for home. My ECMO and I talked about our game plan: dump fuel to a suitable landing weight for a shortfield arrestment. We had to take into account the 3,000 pounds of stores we were carrying, making a long straight-in approach and slowing to 180 knots to run the flaps and slats down with the emergency electrical method. We also had to blow the landing gear down at 150 knots and drop the tailhook.

As we discussed our options, the master caution light illuminated again and I saw the rudder-throw light come on. I couldn't believe it. I stared at the hydraulic gauges and saw the combined hydraulic system at zero. In total, we had a rudder-throw light, a backup hydraulics light and all the hydraulic gauges reading zero.

Almost immediately, the aircraft began a rapid roll to the left – the heavy wing – and the nose fell through the horizon. I countered with right, aft stick but it had no affect. Then, I fed in the right rudder to the firewall, also with no affect.



Passing through 60 degrees left bank, and 20 degrees nose down, I told my right-seater to eject. She was rather stunned so I told her a second time. She punched out using the upper face curtain and I recall a tremendous explosion and a sensation of yellow confetti throughout the cockpit; her PCL had shredded during the ejection. I also remember seeing her boots, eye level, to my right as her seat went up the rails.

I used the lower handle with the plane in a 90-degree bank, 30 degrees nose down. I let go of the stick just long enough to pull the handle. My right leg was still jamming the rudder against the firewall. I remember the tremendous punch and ride of the ejection. I recall the sensation of free-fall and discovering that I didn't have a chute yet. I reached for the D-ring with my right hand and at about the time I touched it, the parachute deployed. I had a good chute except for a small tear at the six o'clock position, so I decided to use my four-line release.

I looked for our aircraft and saw it below me continuing left rolls, virtually straight nose-down, until it hit the water with a tremendous splash. It left a large, bright green spot on the water.

I released my seat kit and the bottom half fell away on its lanyard, deploying the raft. Using the four-line release, I pulled down on the left handle and turned around to see my ECMO in a good chute with her raft deployed. She had made it out OK and seemed to be preparing to enter the water.

The descent seemed to take forever. I even had time to take out my PRC-90 a couple of times to transmit a call for help. It was the middle of February and I knew that the water would be pretty cool. Although I could see the coastline, I had no way to try to get closer to the beach. There were 50-knot winds from the west blowing us further out to sea.

I entered the water about 15 miles offshore. I manually released my chute and it quickly disappeared. I pulled my raft by the lanyard and tried to get into it several times. The CO_2 bottles had inflated the LPA so large that it prevented me from getting into the raft. So I rested on my back with my heels up on the side of the raft. Then I worked my legs, up to the knees, into the raft. I released one side of the seat pan and pulled the rest of the raft under me until I was able to slide into it. I took my helmet off and started bailing. I then fired some of my pencil flares but that action seemed to only affect the seagulls that had come by to check me out. I took out my mirror and began sweeping the western horizon and calling on my PRC-90.

After 45 minutes, I noticed a P-3 circling west of me at low altitude. I focused my mirror on him and also shot a few more flares. He seemed to see me and headed for me as I kept signalling with my mirror. Shortly afterward, I heard, but couldn't see, a helicopter. An SH-60 arrived and dropped a horse collar. I sat in my raft, waiting for the swimmer until I figured out they didn't have one.

I rolled out of my raft and swam after the horse collar, using my torso harness D-ring instead of the collar, itself. I didn't notice how cold I was until I was inside the helo. I began shaking and shivering uncontrollably while we flew to the hospital.

My ECMO was rescued by another helicopter. She had sustained minor injuries from the ejection. ◀

LCdr. Parsons is an EA-6A pilot with VAQ-33.

Thank You, Sir. May I Have Another?

By Lt. John Watson

A student was scheduled for a solo acrobatics hop in the T-2C. Unfortunately, the weather wasn't VMC so he had to fly his "solo" with an instructor. Because it was a "shotgun" solo, the instructor let the student brief the entire flight in accordance with SOP and the briefing guide.

Start up, taxi and takeoff went well and the student set up for his acrobatics after entering the work area. He did wingovers, barrel rolls, and aileron rolls before starting the overheads. After a couple of loops and half cuban-eights, he set up for an Immelman.

The instructor, having sat in the back for an hour without touching the stick, asked if he could fly the plane after the Immelman. Of course, the student said yes. The instructor said, "Leave it inverted at the top and I'll take it from there." The instructor didn't realize what he was in for.

The student started the maneuver and, just as the instructor had told him, he left the Buckeye inverted, at which time the instructor took control. The instructor planned to take the plane at the top of the Immelman and just keep the nose coming through to complete a loop, then have the altitude to perform more acro before giving the plane back to the student.

Everything looked good as the instructor took control at 16,000 feet and started pulling through the horizon. As the dive angle approached 90 degrees, the nose of the T-2 stopped! There was no pitch authority!

The instructor pulled on the stick with everything he had but the nose did not respond. By now, the throttles were both at idle, and the speed brakes were out. The aircraft picked up speed as the altimeter continued to unwind. The Buckeye was passing through 11,000 feet – the altitude at which the loop should have bottomed out – going almost straight down.

A million thoughts went through the IP's head, including, "How am I going to explain this to the skipper?" Luckily, in his panic, he glanced at the trim gauge; it read -4 degrees. "How could that be?" he wondered. "I thought I ran the trim up already."

His thumb jumped onto the trim button and ran it up until the aircraft responded. After recovering at 4,000 feet, a little below the altitude he wanted, the instructor climbed back into the operating area. Not realizing what just happened, the student said, "Sir, that was great. Can we do it again?" The instructor gave the plane back to the student and the rest of the hop went as briefed.

The lack of communication was the culprit here. The student had trimmed the aircraft for inverted flight but didn't tell the instructor. With the trim at -4 degrees, the T-2 went straight down and with the airspeed increasing, there was no way to pull the nose through the horizon.

At first, the instructor thought that he had run the trim up to try to get the nose to respond. Fortunately, he looked at the trim gauge or the Navy might be minus one T-2 and two aviators might have become IROK experts.

At first impression, you could criticize the student for trimming the aircraft for inverted flight, but the instructor was more to blame. First, he didn't brief when or if he would take control. Second, he took control at a critical point in the maneuver. Third, he *assumed* the student knew what he was going to do next. If the IP had briefed every detail of the flight, the incident would not have happened.

Both the student and instructor learned something. Whether it's flying with a wingman or if there are two or more people in your aircraft, brief everything and don't assume they know what you are going to do next. ◄

Lt. Watson flew A-7s with VA-72. He was a SERGRAD with VT-26 when this incident occurred.

The Skipper Gets Radical

By LCdr. Ronald C. Raymer

I had joined my first squadron shortly after it returned from deployment. Even though I hadn't been to the boat, I had a couple of hundred hours in the SH-3H by the time we began workups. I was still the nugget pilot, though, and I was crewed with the skipper. Once I got over the shock of not knowing anything about the different world of the carrier, I settled down and thought that things weren't all that bad; I just had to take things one step at a time. Fortunately, the CO was patient and helpful to all the junior pilots. Our first flights were during the day and he drilled me on shipboard launch-and-recovery procedures and how not to make a fool of myself on the radio.

My first night flight was scheduled on one of those very dark, moonless nights. The skipper, as always, was thorough in his brief and explained every step in the takeoff sequence. He said that he would fly from the right seat that night since it was my first night flight off the boat. We would lift into a hover and he would go on instruments. He'd climb straight ahead to 300 feet AGL and at least 60 KIAS before beginning a slow, left turn around the stern of the ship to our plane guard position in starboard delta.

I was to monitor the gauges on takeoff and keep my right hand on the speed selectors until we were safely airborne, then complete the post-takeoff checklist.

We manned up and after the ship turned into the wind, the Boss cleared us to launch from spot four. The skipper lifted the aircraft into a hover just as we had briefed. After I gave him a "gauges checked good" call, he lowered the nose to transition to forward flight. I dutifully had my hand on the speed selectors and was looking at the lights of the ship through the CO's right-side cockpit window.

Things seemed to be OK until I noticed that he had started his left turn to starboard delta almost immediately after we had cleared the angle. As I saw the ship disappear from view under the right side of the helo I scanned my gyro and saw that we were still at a slow airspeed and now in a 20-degree bank, which was increasing. I was confused.

My normally conservative HAC was in the process of doing a pretty radical left break off the boat on a very dark night. In a split second I knew something was wrong. I felt myself start to shift to the left of my seat and realized that the skipper would not do this kind of departure intentionally. I don't recall if I cross-checked his gyro before or afterward but nonetheless, I suddenly said in as forceful a voice as I could, "I got it, Skipper!" Fortunately for me, the first crewman said, "Watch your turn!" at the same time, so the skipper relinquished control. I leveled the wings and climbed to 300 feet.

The skipper saw that his gyro had precessed to more than 90 degrees wing down. He had made the left turn after takeoff because the gyro showed the aircraft in a wings-level attitude. I had seen the turn begin out the right window with the ship as a visual reference so I was sure we were actually in a sharp left turn. The first crewman could also tell the same thing since he could see the ship out his starboard window.

The skipper had a bad case of vertigo for a few seconds until he saw the ship. Initially, he was upset with me for taking control but quickly realized that we might have gotten into serious trouble that close to the water if the helo had kept turning. We told the boss that we were down and we landed after the fixed-wing recovery.

At our next AOM, the CO told the story to the entire wardroom. Although he didn't feel we had ever been in dire straits, he praised me for not only recognizing the situation but for having the gumption to take the controls away from him. He also said that without crew coordination, represented by the first crewman's call, he might not have been so willing to let go of the controls to a nugget on the JO's first night flight from the ship.

Precessed gyros and other malfunctions can happen to anyone, even COs. In a multiplace aircraft, crew coordination is a must since everyone will end up in the ocean together if the pilot doesn't recognize an impending emergency. ◄

LCdr. Raymer flies SH-3Hs with HS-15.

Nice Break. . . Wrong Airport

By LCdr. C.H. Maynard

It was a sweet deal: three jets that needed to be flown and three warm bodies that needed a cross-country. We could go anywhere, as long as we got out of town fast (so maintenance could secure) and we brought the airplanes back the next day. Key West was one leg away and a fun place for grownups on a Friday night. We filed quickly, took a look at the NOTAMs in case we needed a PPR, and we were off. I was Dash 2 and was flying with two highly experienced squadronmates.

The trip down went fine and we began our descent at dusk. We were on the jet route inbound to the Key West TACAN when center switched us to approach control. Approach gave us vectors to a southerly heading to enter the initial for runway 7 and we changed to the tower frequency.

As we crossed the initial, the wingmen closed in tight for the break. It was very dark now. Tower told us to plan to enter the break for runway 3 to land on runway 7. This was a standard procedure so as not to conflict with Key West International.

At this time, I noticed that my lead was drifting left and assumed he was cheating a little to align with the active runway so I didn't say anything. Soon afterward, he made a hard left turn, which I matched only to realize he was actually breaking over runway 9 at International. With only one radio, I called, "Wrong airport" on the NAS tower frequency. Realizing his mistake, lead made a 360 with me still on his wing and entered the break at NAS. Dash 3 did his own thing and came in behind us. We all landed safely.

The tower was most concerned about our actions and asked about our transgression. They didn't press the point, though, and we didn't think any more about it. Little did we know, however, that the phone lines were burning up for the next couple of hours between Key West and our home base. Through incredibly bad timing, CAG was in town the next day when we returned home, and he was open for business.

At the end of his blistering tirade, he asked how the lead could have had the wrong TACAN channel (Key West versus NAS Key West) set in when the number should have been right there on our jet log. Jet log? I vaguely remembered jet logs from the training command but had long since dismissed such detailed flight planning as un-fleetlike and wholly unnecessary. After all, what did you need for a cross-country besides an enroute supplement, charts, approach plates, and the will to go?

LCdr. T.B. Surbridge

After we scampered from CAG's office like spanked puppies, I wondered if maybe the old guy didn't have a point. Were we really prepared for all eventualities on this flight? There wasn't much of a brief; everything standard, right? It was only a drillex at altitude to a place we had all been to before, right? Wrong.

It was a flight of three expensive aircraft to a place we hadn't been to recently and that was very dark when we arrived. Preflight preparation varies from one mission to another. What doesn't change is the absolute necessity to be prepared for whatever comes your way. It doesn't take a lot of time to review arrival procedures and to conduct a brief using SOP.

I won't say that I actually fill out a jet log now, but I do take that little extra time to prepare so that I at least end up at the right airport. ➤

LCdr. Maynard flies F/A-18s with VFA-204.

The "kick the tires and light the fires" attitude has bitten more than one aviator. Professional preflight planning is more than fuel figures. Knowing where you're going and how you're getting there along with diverts, approaches and airport rules are all important to a successful (and less embarrassing) flight. When the cockpit fills up with snakes, having filled out a jet log means one less snake you have to deal with, having killed it before you left. – Ed.

Me Tarzan;

Obviously nap-of-the-earth (NOE) is a high-risk environment that is fairly new to the HS community. Even minor malfunctions or a moment's hesitation can be disastrous when your clearances are measured in single digits. Weedwacking was not my intention on this flight but we struck a tree.

As a first-tour H-3 driver, I was brought up to believe that ASW was the bread and butter of a good Sea King HAC. I was surprised recently when the CO came up and asked if I would participate in the command's strike-rescue training syllabus. I wasn't sure what that training included, but I said, "Sure, skipper."

I started realizing that this was a special opportunity when I saw that the CO had planned for four fully qualified strike-rescue pilots: the CO, XO, Ops O and *me*. I was the only JO in this select group of aviators. It suddenly dawned on me that this was going to take a lot of hard work and that I would be in the spotlight as the least experienced pilot.

The Strike-Rescue School at the East Coast H-3 FRS had just opened. After one week of intensive ground school, I felt reasonably confident about the flight phase. The ground school consisted of threat analysis, strike-rescue planning, procedures for low-level terrain following and evasive maneuvering.

The flight phase began the following week and included 25 hours of low-level flight training, terrain masking, confined area landings and evasive maneuvering. I was in hog heaven. It was some of the most demanding and fun flying I had ever done. The syllabus concluded with a simulated low-level strike-rescue mission.

I was quickly gaining confidence and ability—at least so I thought. I was rudely awakened on my second low-level terrain-masking flight. Having just watched my instructor demonstrate a low-level NOE route, I confidently took control and tried to mimic his coordination and skill.

"No problem," I told myself as I psyched myself up for the low-level run. The terrain was typical for northeast Florida with 30-foot to 50-foot pine trees, brush and patches of grass and sand. Both of my crewmen were also under instruction and had been positioned at the forward personnel door and at the aft cargo door as lookouts. They had been briefed to call "elevate" if we got too close for comfort to any of the flora and fauna.

The route started a one end of a dirt strip and gradually transitioned to low brush and finally to medium-height pine trees. The route was two miles long and meandered from left to right with frequent changes in altitude and direction. It was like a slow roller coaster through the woods except that I was in complete control of this ride.

The challenge was to keep the rotor blades and fuselage at a constant five feet to 10 feet above the trees and to stay above

By Lt. Gregory J. Fick

We Lucky!

other obstacles. My indicated airspeed was 40 knots with only 10 knots groundspeed. I was having the time of my life. Birds, squirrels and pine cones were blowing all over the place as I yanked and banked through the tree tops like Tarzan the Aviator.

"This is so much fun, it must be illegal," I thought, totally oblivious to the impending danger waiting in the shadows of the jagged treeline.

I was concentrating so hard I was totally shocked when a crewman yelled, "Elevate!" I immediately leveled the wings and yanked the collective into my armpit.

"What now?" I thought, angered by this momentary disruption.

"You chopped about four feet off the top of that young spruce, sir!" the aft crewman said. I detected a slight hint of guilt in his voice.

"Roger," I replied and leveled off at 200 feet above the trees. I quickly scanned the deck trying to locate the nearest suitable landing site. I looked over at the ashen face of the instructor as he breathed a sigh of relief and wiped his chin.

"Close call, buddy," he muttered. We quickly completed the landing checklist and I began my transition into a small clearing in the pines. The silence over the ICS was deafening. I thought about shutting the rotor system down to do a thorough inspection but decided against it. After all, we didn't experience any unusual vibrations and the quick walk-around proved we were undamaged...or did it? If we did shut down and discovered major damage, it would have been a long walk home through the woods.

During the return flight, I thought about what had gone wrong and what I could do to avoid a similar mishap in the future. (Actually, I thought about hiding the aircraft until I could figure out a way to blame it on the line rats!) I wondered about how I was going to explain this one to the skipper, the same guy who thought I was good enough for the program. I thought about all the harassment I would have to endure from my fellow JOs and about the long green table, the one that's not used for billiards. I was getting nauseated. Better not think; just keep flying.

We made it home and shut down. As we made a closer check of our battle damage, I immediately recognized the pine branches sticking out of the landing gear and I got this sick feeling in my stomach. I looked up at the main rotor blades and couldn't believe how much damage there was to the leading outboard edges and tip caps on four out of five blades. That little spruce might as well have been a mighty oak.

One last note, low-level NOE flying increases your chances of successfully making a rescue in a hostile environment, but obstacles will get you as quickly as a missile or enemy groundfire.

Lt. Fick is an SH-3H HAC with HS-11.

The Three Amigos

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By LCdr. Bruce Buck

We were finally on our way. After those countless workups, the skipper, myself (a crusty old pilot,) and a senior lieutenant left Whidbey for the ship to start our six-month deployment. We were all mission commanders, starting what we hoped would be a great deployment.

En route, an A-6 from our base joined on our wing with navigational problems. We were glad to steer him toward our new home. There was a solid white overcast at the ship so everyone went into marshal to wait for a Case II recovery.

The A-6 had a buddy store and the ship wanted us to check that he had good transfer. We changed leads and took on 500 pounds of gas. Just as we were backing out of the basket, marshal said, "621, turn inbound and begin your approach with 503." We retook the lead, turned on the dumps and descended. Pro that I am, I secured the dumps with just the right amount of fuel left.

Descending through the clouds, I said to my skipper, "This looks pretty thick. I hope he hangs on." Just then, the Intruder lost sight and broke off the formation flight. Marshal went ahead and vectored the A-6 in behind us. "Thanks, marshal," I thought.

We broke out at about 900 feet and reported,"621 sees you at 5." When we hit the break, we realized we had 2,000 pounds of gas stuck in the wings. We couldn't trap just yet. We entered a delta pattern at 700 feet overhead the ship to figure out what to do with all that wing fuel. It still wasn't transferring and now the main bag was burning down lower and lower. Was it just a bad gauge? Maybe. We knew that if we secured all power to the aircraft, the fuel would transfer to the fuselage.

So, at 700 feet, under a gray, ragged overcast, we secured both generators and flew around the ship NORDO for two minutes. Deciding two minutes was long enough to be without electrical power, we turned the generators back on. Low and behold, some of the fuel did transfer into the fuselage, but now we were below bingo fuel.

Knowing we had the answer to our problem, we decided not to mention our low fuel state to the ship, but we did tell them that we would be off the air for another four minutes or so. Off went the generators again. This seemed real dumb. Why did we suddenly have a wing-fuel transfer problem? Then the light came on – the one that says Delta Sierra.

I had left the inflight refueling switch in the refuel position. In our haste to change leads, bring the A-6 down out of the weather, dump our gas and Charlie on time, we never finished the refueling checklist. On came the generators, up came the fuselage fuel level, and down we went to an embarrassing 3-wire.

Even with all that experience, not one of us had the common sense to look at the checklist. If we had done that sooner we wouldn't have put ourselves below bingo fuel.

At the next AOM, I confessed my blunder. Surely, public discussion is the best way to prevent someone from duplicating that mistake. We got lots of laughs. A few people declared, "That'll never happen to me."

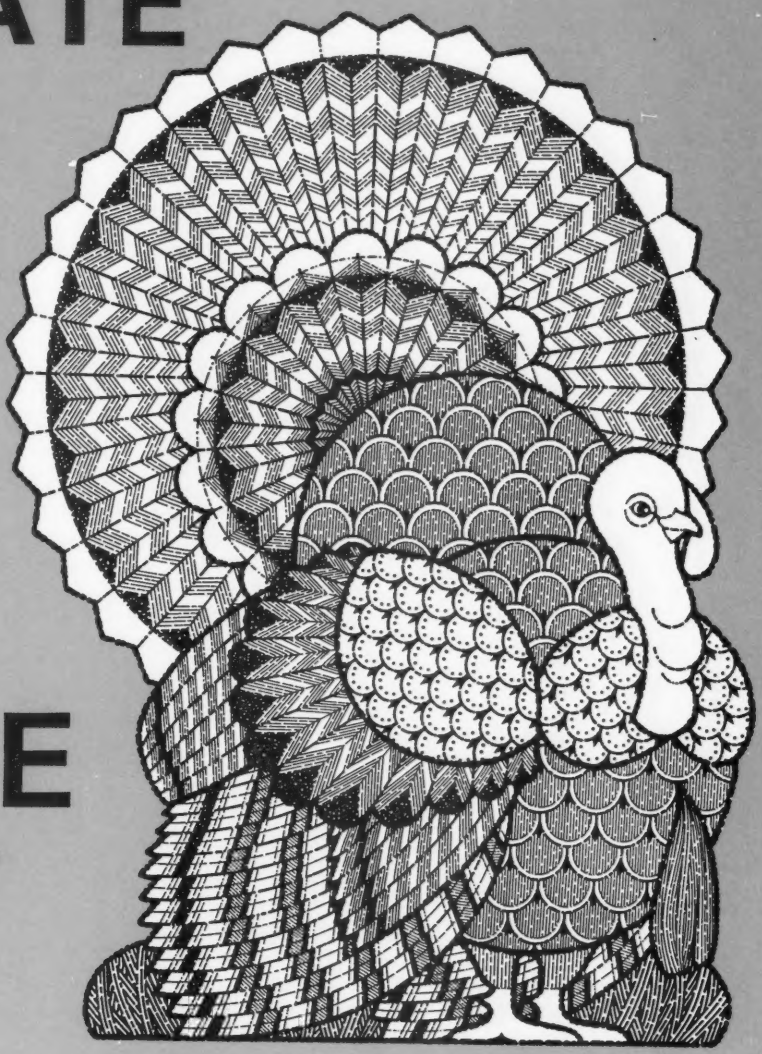
Two months later, on a camel-chasing, sandblasting low-level deep into Saudi Arabia, another aircrew got a rather untimely warning: the low-fuel light. Yep, they had forgotten to return their refueling switch to the normal position, too. Until they make idiot-proof airplanes, completing checklists is the only way to go.

LCdr. Buck is a Prowler pilot with VAQ-138

Cdr. John Leenhouts

Poster idea contributed by:
LCdr. Beattie, VF-24 Safety/NATOPS

TURKEYS HAVE DELICATE DIETS...



PLEASE DON'T FOD THE TURKEYS

FARM FOR SALE

QUIET SURROUNDINGS
WOOD STRUCTURE INCLUDED
FLOWERS BLOOMING ANNUALLY
AREA 3' x 6' x 6'

FOR DETAILS:
IGNORE SAFETY
AND
NATOPS PROCEDURES

Poster idea contributed by:
N.E. Hoecker